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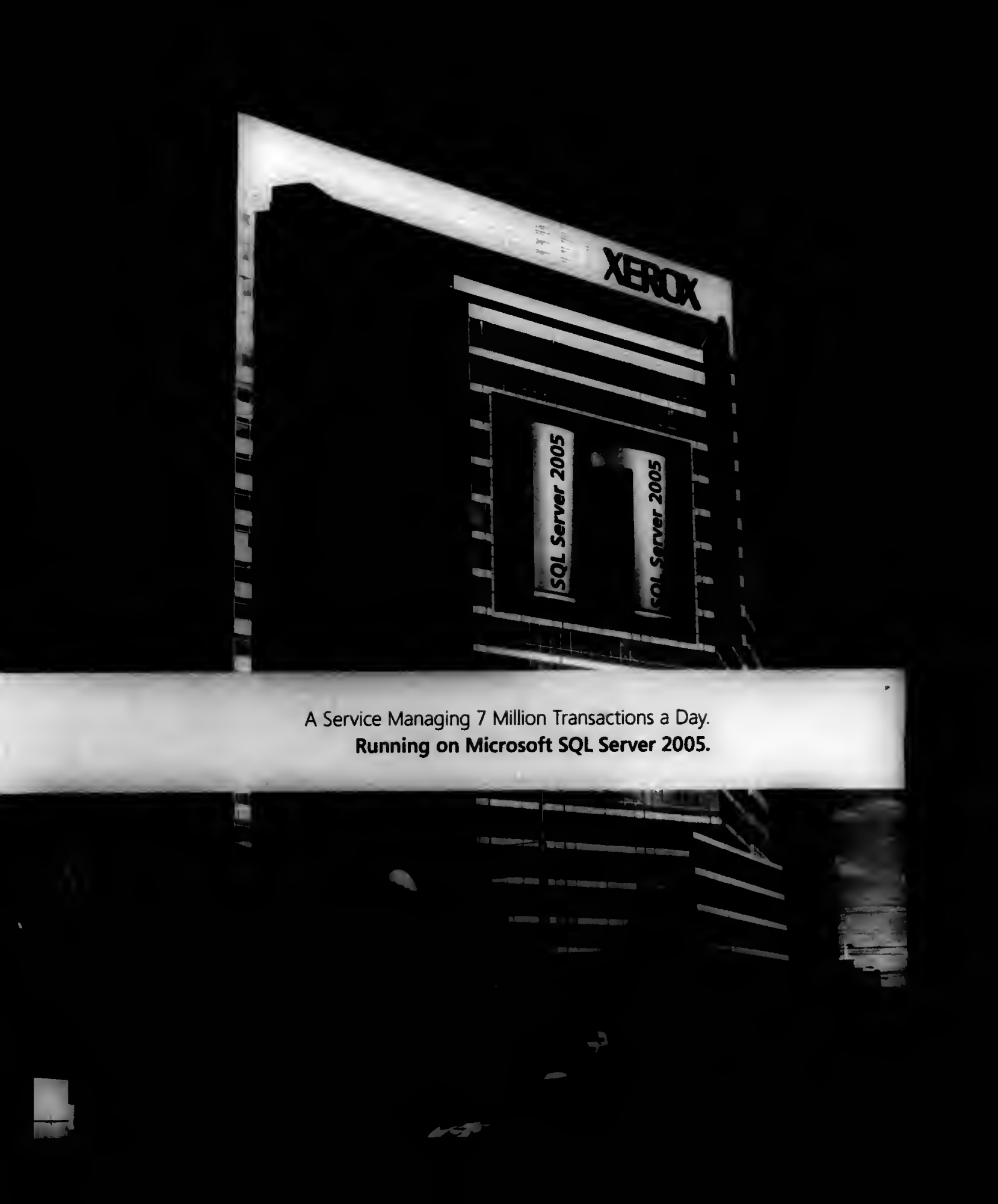

A Service Managing 7 Million Transactions a Day.
Running on Microsoft SQL Server 2005.

XEROX
A Service Managing 7 Million Transactions a Day.

SAMSUNG

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ONLINE

The following stories can be found online at www.computerworld.com/premier100

Quiz. How close are you to becoming an IT leader? Take our online quiz to assess and steer your development.

Data Points. These downloadable PowerPoint slides highlight budget planning and other statistics from the Premier 100 IT Leaders.

Best Bets. Computerworld editors pick their favorite IT leadership articles of 2005.

Premier 100 Honor Roll. View the names of all 700 alumni honorees, from 2000 to present.

Conference Recap. View video webcasts from the 2006 Premier 100 IT Leaders conference, featuring presentations by Ira Winkler, author of *Spies Among Us*; André Morden, chief technology integration officer at PBS; and Paul Higday, vice president, IT and program development, at Owens & Minor.

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PHOTOGRAPHY ON THIS PAGE, FROM TOP TO BOTTOM: SCOTT BRAUER, MANUELLO PARANELLI, GIORGIO PALMIGIANO, ARN STATES

AT DEADLINE

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Cisco Moves to Support Network Management

Readies tools for planning, analysis and monitoring

BY MATT HAMBLEN
SANTA CLARA, CALIF.

CISCO SYSTEMS Inc. tomorrow will announce a set of four network management products and an equal number of companion services, all based on a service-oriented framework that Cisco officials detailed here last week.

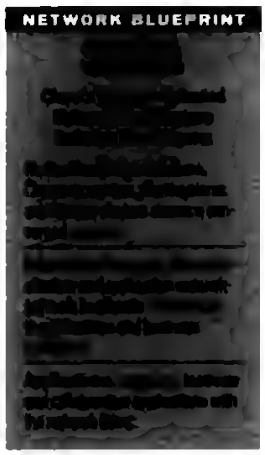
The Network Application Performance Analysis (NAPA) offerings being rolled out this week include software tools for application analysis and network planning, an appliance for managing bandwidth quality and a dashboard application for viewing information about system performance.

Ayman Soliman, a senior network architect at Thomson Financial Inc. in New York, has been testing Cisco's network planning software for the past two weeks but said he still hasn't learned enough about the product to decide whether to deploy it.

Soliman said the tool could help him assess the risks of making changes to Thomson's network, which includes about 3,000 routers and switches in 56 countries. "In a complex infrastructure, if you deploy a new feature, you want to know the effects on the network," he noted. But a thorough test of Cisco's new software is required because it will cost "in the upper $200,000 range," Soliman added.

Cisco wouldn't disclose pricing on the NAPA components last week. It plans to release the network-planning and application-analysis tools tomorrow, while the performance-monitoring dashboard and bandwidth-quality appliance are due in March.

The new services that are being added will allow users to hire Cisco personnel to help troubleshoot or even operate the NAPA products, said Clifford Meltzer, senior vice president of network management technology at Cisco.



Meltzer said the NAPA technology is evolving from Cisco's Service-Oriented Network Architecture, a framework for next-generation business networks that the vendor unveiled at its annual conference for analysts last week.

SONA focuses on enabling more efficient delivery of computing, storage, security, mobility, voice and collaboration services through a virtualized layer that sits on top of network infrastructures, said Charles Giancarlo, Cisco's chief development officer.

Lev Gonick, CIO at Case Western Reserve University in Cleveland, said he has worked with Cisco over the past several years as SONA has been developed and has deployed 7,000 of the vendor's IP phones, 1,350 of its Aironet wireless access points and a Catalyst 6509 Gigabit Ethernet switch.

SONA has allowed Case Western to move computing and network services that previously were dispersed among middleware or applications into its network layer, Gonick said. That, in turn, has enabled data engineers and administrators to be moved into new roles, such as supporting voice-over-IP services. More important, putting the services in the network layer provides "huge benefits" in planning for network architecture design, implementation and ongoing operations, Gonick added.

Case Western's IT engineers are testing the NAPA products, but Gonick said he has yet to receive an evaluation.

NAPA could help IT managers do a better job of planning their networks and application flows, said Zeus Kerravala, an analyst at Yankee Group Research Inc. in Boston. "Customers need to manage across the whole life cycle," not just understand what parts of a network are failing, he said.

But some other analysts said that Cisco's focus on managing applications in the network will be a challenge, especially if the company is unwilling to interoperate and partner with other vendors of management tools.

Cisco wants to become "a strategic partner [with IT managers] in optimizing application performance across the infrastructure," said Dennis Drogseth, an analyst at Enterprise Management Associates in Boulder, Colo. "But no C-level executive in their right mind is going to look for a truly strategic answer that's embedded exclusively in a single hardware brand."

Chambers Eyes Network Rivals in Asia

SANTA CLARA, CALIF.

Cisco CEO John Chambers discussed topics such as competition, network security and emerging markets in a question-and-answer session with reporters at the company's analyst conference here last week. Excerpts follow:

On the competition Cisco faces: "There is a logical evolution of competitors. Every five years, there's another set. We've been in China for 21 years and have always been comfortable and No. 1. [But] most of our competitors in the future will be in Asia. Today, Dell is our toughest competitor."

On Cisco's newly announced focus on emerging markets for 800 executives: "We'll sell architectures and systems in emerging markets, as opposed to products, and work with a country's leaders to drive the success of [that] country, because the success of the country is success for us. Emerging markets are now 10% of our revenues and represent 30% to 45% of our future growth. That's how strategic this is."

On security vulnerabilities in Cisco's products, including ones published earlier this year by security researcher Michael Lynn: "We made the decision 10 years ago that security was an architectural play, and we acquired 15 companies to handle the problem – and now we have over 1,000 Cisco employees in the security area. We have begun to build self-defending networks.

"Like any architecture that works end to end, there are elements you add to constantly improve, and [security is] a constant battle. Do we have issues we have to address with security? Yes. And we encourage security researchers. But you don't get ahead by putting [a vulnerability] on the front page of a paper, because you hurt everyone. Let us address it and find the right way to go about [fixing a security flaw].

"Most security researchers want to help and don't intend to hurt people. We don't want anybody to take this tremendous asset and cause exposures, to bring down hospital networks and 911 networks."

– MATT HAMBLEN

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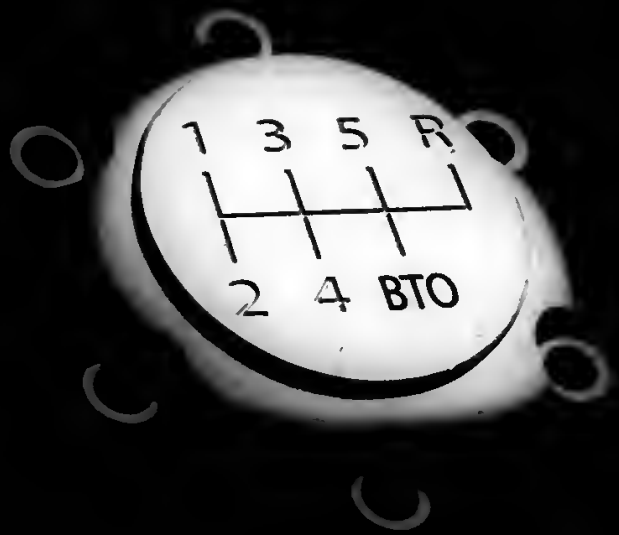

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Cool Chips Offer Some Help to Data Centers

But demand for higher performance still causes server densities to increase

BY PATRICK THIBODEAU
LAS VEGAS

IN PAST years, David McCarter typically bought the fastest and best-performing chips to run his servers. The power and heating impact of the chip wasn't nearly as important.

"Before, you just bought it; now, you look at the big picture," said the data center manager for the city of Virginia Beach, Va. That means matching a chip's performance and energy requirement with its workload rather than just buying the fastest-performing chip in every instance, he said.

Raymond Sullivan, CIO for the U.S. Department of Veterans Affairs Northwest Network in Portland, Ore., is also concerned about server heating and cooling.

Sullivan recently contacted Sun Microsystems Inc. about its new UltraSparc T1 chip, which has eight cores and uses 70 watts. Because of its relatively low energy use and performance, "we have a lot of interest in it," he said.

Considering Consolidation

The federal agency's regional operation is considering consolidating 22 data centers into one primary center and a backup, Sullivan said.

The VA's Northwest Network isn't running Solaris, which is the only operating system that the T1 chip supports today. Sullivan said he will be more interested when Sun adds Linux support to T1. The company last week pledged to enable Linux support but hasn't said when it will arrive.

Sun last week unveiled a pair of T1-based Solaris servers and at the same time began an effort to convince IT managers of the benefits of the chip's increased performance and low power consumption.

IT managers looking hard at heating and cooling issues are getting some help from other chip vendors as well.

For instance, Intel Corp. plans to release early next year a dual-core chip, code-named Sossaman, that uses 31 watts of power. In contrast, Intel's highest-performing dual-core Xeon, the Paxville MP, uses 165 watts. And Advanced Micro Devices Inc. has made the relatively low power usage of its dual-core Opteron chips (55 to 95 watts) a key selling point.

Lower-power chips may offer IT operations some help, but it was clear to attendees at the Gartner Data Center Conference here last week that server densities are moving inexorably higher as more performance is packed into chips to meet the growing needs of many users.

Consumption Grows

The largest rack systems today, which have 98 blades in seven chassis, can consume as much as 24 kilowatts of power.

As chips improve and densities increase, servers consuming 35 kilowatts or more aren't far off, said analysts and data center consultants at the conference.

"I see the [energy] problems growing," said Peter Gross, CEO and chief technology officer at New York-based services firm EYP Mission Critical Facilities Inc.

Mike Bell, an analyst at Stamford, Conn.-based Gartner Inc., said there is huge demand for solutions to the power problem, and he expects more products to emerge as more vendors respond.

"Where there is huge demand, there is innovation," said Bell.

One of Sun's T1 server beta testers is Fiducia IT AG, an IT provider in Germany for 900 banks that runs about 20 million transactions per day through its Java-based systems.

Fiducia intends to soon start upgrading to the new chip, according to Matthias Schorer, Fiducia's technical chief architect.

Fiducia has 800 UltraSparc-based Sun Fire v440 systems. Schorer said his firm has tested the T1 against those systems and found that it can replace at least four of the v440 servers with one T1-powered server because of its ability to handle additional loads.

Decreasing power use would yield a major financial benefit, said Schorer. Fiducia estimates that its IT unit can cut the more than $1.17 million it spends annually on power to about $94,000. "I think it's definitely a breakthrough in IT," Schorer said of the new chip.

MORE THIS ISSUE
Read more about Gartner's data center conference on page 14.

New Sun Executive Discusses StorageTek Integration and the Holographic Threat

BY LUCAS MEARIAN

Sun Microsystems Inc. this week announced new servers based on its UltraSparc T1 processor but still remained mum on its storage plans. **Randy Harris,** *the new vice president of strategy and planning for Sun's Data Management Group, spoke with* Computerworld *last week about the status of the integration of recently acquired Storage Technology Corp. and Sun's plan to address the coming threat to tape systems of holographic storage.*

Where does the integration process with Sun and StorageTek stand?
It's going along pretty well. [Sun is] organized along three business-unit lines. We're figuring out organizational structures because the structures inside StorageTek are radically different than [those at] Sun.

On the bigger picture, we're working on putting all the products on a single price list, which is amazingly difficult because of the way the two companies work. We're trying to get most of the things done in three months.

Of course, things in the [European Union] are taking a little longer because each country has a different set of laws around a merger and acquisition of this size.

Why were storage products missing from your server announcement this week?
We purposely didn't put any storage announcements in there because the announcement was such an overwhelming thing that they would have been lost. In the next quarter, you'll see a few new [storage] products for us.

In the past, Sun has struggled to present a clear vision for its storage business. What is the focus now with StorageTek on board? Actually, we have the current product road map. And we have a three-year plan. We haven't rolled it out externally yet. We're discussing that and will probably start to talk to people about that in the early part of next year. We have a five-year plan, and we'll keep that quiet for the next two or three [years], until we get closer in on it.

Do you consider holographic storage a threat to the tape products from StorageTek? Until I see density characteristics of holographic storage that exceed what we have today, I don't see it as a threat. Once I start seeing those characteristics get to a certain point and can say, "This is really cool stuff," then it's a threat. It may become a higher tier in the hierarchy, and it may become another removable media.

Does Sun plan to integrate holographic storage cartridges into the StorageTek tape library systems?
If it makes economic sense, we absolutely will. We're not developing holographic storage ourselves, but if a technology exists from another vendor [that we can] introduce into our library mechanism and it makes economic sense, we'll do that.

Holographic [storage] may yield some density advantages. So if those get to the point where it is economical and it is reliable, we'll be in place to capitalize on it.

Is there any work now under way at Sun on adapting the tape libraries to ultimately support holographic technology? We have some advanced technology work that always goes on. It's not a full development program. It's the type of thing where you get a head start on it so if it looks like it will materialize, you'll be a long way down that road. That's what's going on right now.

BRIEFS

Microsoft to Add 3k Staffers in India

Microsoft Corp. plans to increase its ranks in India by 3,000 employees over the next three to four years. Chairman Bill Gates told an Indian industry forum in Delhi that the company's Indian workforce will reach 7,000. It wasn't clear whether the new staffers will all be employed by Microsoft or will include employees at outsourcing companies in India that work for Microsoft.

MCI Unveils New Security Service

MCI Inc. has introduced a security risk management service designed to help large organizations proactively deal with system threats and vulnerabilities. The NetSec Security Risk Management Service uses a scorecard-based approach that lets users prioritize and resolve security risks. The service will be available in the U.S. next month and in Europe late next year.

Juniper, Symantec In Development Pact

Juniper Networks Inc. and Symantec Corp. have agreed to jointly create software that makes sure remote machines meet security policies before they can access Juniper Secure Sockets Layer virtual private networks. The software will be based on technology Symantec gained through its acquisition of WholeSecure earlier this year that will allow users to create specific policies for separate groups.

Novell's Identity Manager 3.0 Arrives

Novell Inc. has introduced Identity Manager 3, which is designed to speed up the process of managing employee passwords and user access rights by shifting that function away from the IT department. Version 3 gives business managers the ability to make changes to the usage rights of the employees who work for them.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Stop Squeezing Desktop Apps . . .

. . . to fit on a mobile device for end-user access. Instead, turn application access into message processing. That notion comes from ClairMail Inc. in Novato, Calif. According to CEO Joseph Salesky, people are mobile, but desktop applications aren't, and IT's attempt to give the apps some mobility has been like "trying to squeeze an elephant into the doghouse." For example, a lot of desktop software is dependent on using multiple windows on a monitor, Salesky says. But, he points out, small handheld displays mean that "mobile devices don't window well." That's why his start-up company is offering a message-access process for mobile users beginning this week. End users put application access links into their devices' contact lists. When they need access, they simply click on a link, like they would to make a phone call or send an e-mail. Data can be retrieved or entered based on a user's rights, which are checked against the privileges stored in a company's network directories. A ClairMail appliance sits behind the corporate firewall and handles all of the message transactions, so no client-side software is necessary, Salesky says. He adds that combined with an application's user-authentication processes, the ClairMail appliance's knowledge of the "trusted path" to a specific device adds two-factor security, since both the user's identity and the handheld are verified. ClairMail is releasing its technology with scripts for accessing software and services from vendors such as Salesforce.com Inc., Business Objects SA and BMC Software Inc.'s Remedy unit. Next year, the company will release access scripts for Siebel Systems Inc. and SAP AG apps, Salesky says. Annual fees start at $60 per user.

Forget about the engineer, but still . . .

. . . get long-distance fault tolerance. Ron McCabe, CEO of MiraLink Corp. in Portland, Ore., quips that traditional WAN-based fault-tolerant systems "are so complex, they ship with an engineer." On the other hand, McCabe claims that his company develops appliances that handle fault-tolerant needs and don't require a BSEE grad to tag along with the technology. "Anyone who can manage an IP address or SCSI drive can use it," he boasts. MiraLink's data-mirroring devices use the company's IntelliBuffer software to write data to remote servers while saving the information to the primary system, McCabe says. He adds that in the event of a primary server crash, databases can be rolled back to the transaction processed just before the server hiccup. MiraLink's high-end unit can handle up to 120GB of data per hour. Next month, the company will roll out a low-end appliance, Model 400, which will be able to save as much as 8GB of information to remote servers hourly. It will be priced at under $4,000.

Or virtualize your apps to achieve . . .

. . . local fault tolerance. That's the approach taken by Appistry Inc. in Crevecoeur, Mo. CEO Kevin Haar argues that "applications should transcend the infrastructure" and be virtualized to achieve fault tolerance. Appistry does that through its Enterprise Application Fabric software, which will be updated with a 3.0 release in Q1 of next year. The new version will dynamically store data in memory on multiple servers on a LAN segment, much like a RAID storage system secures saved data to multiple disk drives. When one server fails, the Appistry software, which maintains the state of every transaction, simply grabs needed data from another machine in the fabric so transactions can continue unaffected. What's more, says Haar, the software can automatically provision a new server when it's attached to a LAN segment. Subscription-based pricing starts at $1,950 per CPU on an annual basis.

Protect PowerPoint presentations . . .

. . . from prying eyes. Leo Baschy, a research consultant at Nirvana Research LLC in Copperopolis, Calif., gives a lot of thought to the connection between graphical user interface design and security in common software applications. For example, he's working on technology that's designed to help people who put together PowerPoint presentations define the content according to its sensitivity. With that functionality, Baschy says, a CIO could create different versions of a presentation about his company's IT investments and the state of current projects for different audiences. One version could be a warts-and-all look for the board of directors; another could be aimed at internal users and highlight the benefits and changes that IT projects will bring; and a third might be used at external conferences. By defining the audience access rights in the PowerPoint program, the CIO could ensure that only the appropriate slides get flashed on the screen. (Which audience is in the room is something the presenter had better not forget, of course.) Baschy wouldn't speculate on when such a tool could become available.

Introducing data centers on demand

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ISXT240MD11R	11	up to 5kW	$249,999*	$7,999**
ISXT280MD40R	40	up to 5kW	$699,999*	$21,999**
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High Density Configuration *(shown above)*				
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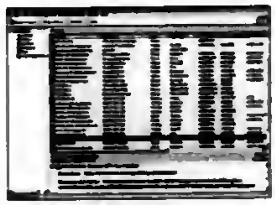

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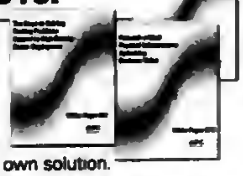

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IN-DEPTH COVERAGE: DATABASE DEVELOPMENT

New Programming Options Pose Dilemma for SQL Server Users

Microsoft has enabled database code to be written in general-purpose languages. But that won't always be the best approach, some caution.

BY CAROL SLIWA

ONLY THREE of Nasdaq Stock Market Inc.'s 30 developers have expertise in using the native programming language for Microsoft Corp.'s SQL Server database. So for two major upcoming IT projects, the New York-based exchange hopes to write database code using general-purpose programming languages that all of the developers know.

That approach wasn't possible until recently for users such as Nasdaq. Two of the most heavily promoted new features in SQL Server 2005 are the deeply integrated Visual Studio development tool set and the .Net Common Language Runtime (CLR) execution environment. Microsoft executives have cited the work required to integrate those technologies as the main reason for the more than two-year delay of the database upgrade, which the company finally released last month.

Ken Richmond, Nasdaq's vice president of software engineering, expects that his staff will be able to write all of the stored-procedures code for the upcoming projects in CLR-supported languages such as C# or C++ instead of Transact-SQL, Microsoft's extension of SQL. "It's one of the things that I find very, very attractive" in SQL Server 2005, Richmond said.

He isn't alone. More than half of 35 IT managers who responded to a random survey conducted by *Computerworld* also said they expect the integration of Visual Studio and the CLR with SQL Server to be helpful. Some even predicted that it will change their philosophy about database programming and lead them to put more logic directly into their database servers.

"It standardizes programming languages and gets us away from the sometimes archaic SQL language," said Christopher Siegle, a Pittsburgh-based systems analyst and project lead at Kirkpatrick & Lockhart Nicholson Graham LLP, a law firm with offices in the U.S. and the U.K. The integration will also help strengthen communication between database administrators and developers, he added.

Timothy O'Rourke, vice president for computer and information services at Temple University in Philadelphia, said his staff can "start building reusable code with .Net to execute logic from SQL Server." That is "much more flexible and powerful" than putting business logic at the application server tier, he said.

But any IT shop that hopes to make heavy use of the new development options will need to do a careful analysis, because using .Net languages likely won't be the best approach for all of their database development work, according to several programming experts, analysts and users.

There will be plenty of instances where code written in T-SQL "will beat the pants off .Net CLR code," said Phil Hummel, a solution architect who works at Microsoft's technology center in Mountain View, Calif. "I don't want to see people waste time heading down the wrong track of trying to do everything with .Net procedures just because we have new features that will help people in some selected situations."

New approach adds flexibility

More training will be needed

Users such as Keith Glennan, chief technology officer at Los Angeles-based Northrop Grumman Corp., are already anticipating the need for additional training to make sure their IT staffs can achieve optimal use of the CLR. Glennan said the new options will present a challenge to developers who are trying to determine when it's appropriate to embed code in a database.

On one hand, Glennan said, the new capabilities should make it simpler and more efficient for developers to encapsulate business rules within a database. But on the other hand, application logic embedded in the database will have to be controlled the same way that it was when it was in the application layer, he said.

"The trade-off is between optimized performance and transparency of your object model," Glennan said. "It requires a lot of discipline in how and where you define objects and services. There's never a completely black and

Continued on page 12

Key questions that developers should ask:

[redacted]

Microsoft Starts From Behind With Its Own Technology

IN A STRANGE bit of irony, Microsoft's database rivals supported its Common Language Runtime engine for stored procedures even before the company provided the CLR capabilities itself with the November release of SQL Server 2005.

Les King, program director of DB2 marketing at IBM, said his company was first out of the gate with support for CLR stored procedures two years ago. Oracle followed suit this year as part of its 10g Release 2 database. In both cases, the CLR support is available only when users run their databases on Windows servers.

But despite running behind, Microsoft claims that it will have the upper hand because its implementation of the CLR is built inside the process that manages all the resources for SQL Server 2005.

"What that means – and this is the key difference between our implementation and our competitors' implementations – is you have the ability to write CLR code for both stored procedures and triggers, and all with a consistent security model," said Corey Thomas, a group product manager for SQL Server at Microsoft. "However you set the security policies inside SQL Server, those policies will be the same that apply to your CLR code."

That eliminates the need for developers to manually write the security policies at each layer of the application, Thomas said.

An IT architect at a manufacturing company who asked not to be identified said he expects his development group to slowly shift to CLR-supported languages in order to put more database access controls in SQL Server itself. Much of that logic is currently built into the company's applications, and the databases are accessed via application accounts, he said.

"The idea is for the database to protect itself, rather than writing an external application layer to control data access," the architect said. "Then you can give end users direct access to views for end-user reporting, rather than extracting the data into a data warehouse and building your data security controls all over again."

The manufacturer's small group of database administrators could do the work with stored procedures in T-SQL, but they already have their hands full overseeing the company's databases, he added. Keeping the security logic with the application developers, working in the languages they're familiar with, makes more sense because they typically have a better understanding of the business and security rules that apply to the company's data, he said.

In addition, they will have access to a rich set of .Net components that could, for instance, help them to get data from an Oracle database as part of an authorization check, the architect said.

"T-SQL and stored procedures are not the best tools for accessing non-SQL Server data," he noted. "But sometimes you need data from other sources to securely process a query."

– CAROL SLIWA

DATABASE DEVELOPMENT

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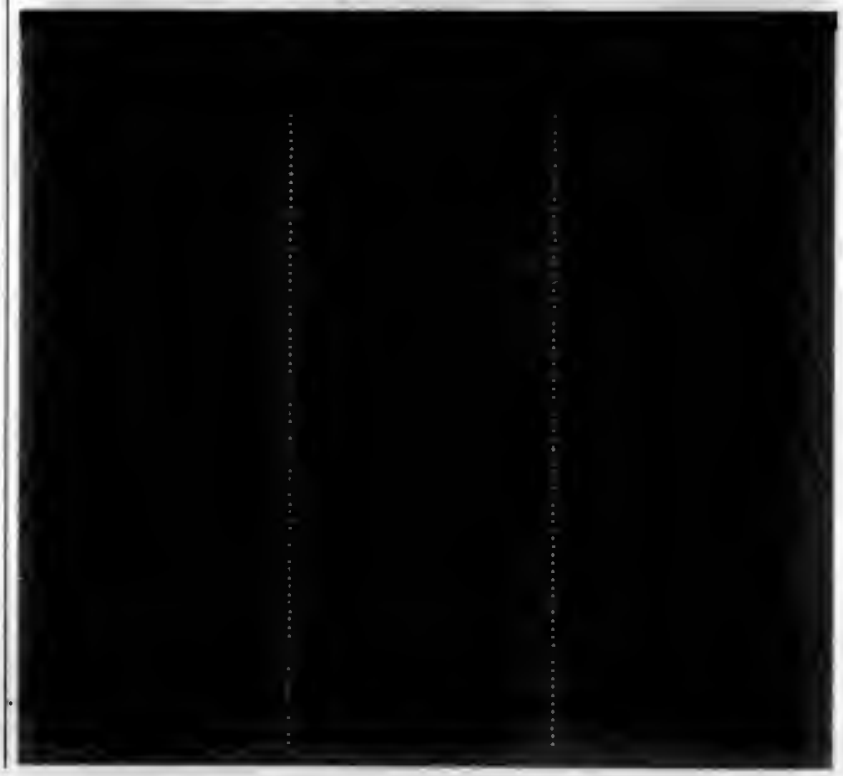

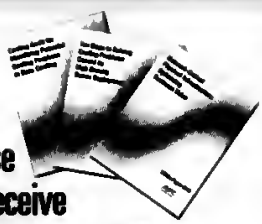

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Zetie said he worries about the prospect of users "backsliding into entangled code" after having spent a considerable amount of time layering their systems.

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MEDITERRANEAN SHIPPING CO

But those aren't typical bread-and-butter data manipulation and retrieval uses, added Brust, who is chief of new technology at Citigate Hudson Inc., a New York-based Microsoft business partner that specializes in development of business intelligence applications. T-SQL will remain the better choice in those scenarios because it's optimized for testing, retrieving and changing large sets of data, Brust said.

Microsoft said that in SQL Server 2005, it has improved T-SQL's exception-handling capabilities and added a set of relational operators and query-language extensions. Those are designed to better align it with the SQL:2003 standard and to enable users to navigate hierarchical relationships in a table, handle large data values and pivot data.

"T-SQL is a wonderful language," said Paul Flessner, senior vice president of server applications at Microsoft. "We're not going to orphan it in any way. As long as there's a SQL Server, there's going to be T-SQL."

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"There's a perception — accurate or not — that a [Java virtual machine] operating in the database slows the database down and makes it more resource-hungry," said James Brockman, a developer at the Missouri Department of Insurance. "DBAs in particular are unpersuaded by arguments from developers that using Java everywhere would help their productivity or mean one less learning curve to climb. They don't understand Java, so developers are not allowed to use it."

Microsoft users may be more likely to want to take advantage of the company's new programming options, said Gartner Inc. analyst Mark Driver. He noted that it isn't unusual in the Microsoft world to find a developer working on the user interface as well as the business and database logic, whereas in Oracle environments, database developers tend to focus only on database code.

Yet Driver doesn't expect the ability to write stored procedures in languages like Visual Basic to be the driving factor that gets IT managers to upgrade to SQL Server 2005. "Most of the energy and excitement around SQL Server is around scalability and the database engine," he said.

CLR: Best for computation- or logic-intensive operations. A better option than 'extended stored procedures,' which Microsoft offered in earlier SQL Server releases for creating server-side code with logic that's difficult to write in T-SQL.

T-SQL: Best for data manipulation and retrieval.

Users Split on Wisdom of Logic in Database

ALTHOUGH THE deeply integrated .Net technologies in SQL Server 2005 will give Microsoft users new options for programming business logic into their databases, it's unclear to what degree that will inspire IT shops to modify their current development strategies.

The 35 IT managers polled by *Computerworld* were split about evenly on the topic. Some respondents insisted that logic has no business being in the database. Others said they plan to take advantage of the new capabilities.

"The more business logic that we can integrate directly into the database, the better," said David Buzzell, CIO at The Sedona Group, a staffing services and IT consulting firm in Moline, Ill. "This helps to ensure all data within the system is following established business logic. If the data isn't adhering to our business rules and isn't properly structured, then the data won't help us in the long run."

An IT manager at a major national retail chain said SQL Server 2005 will make it easier for internal developers to follow the IT department's strategic-directions document. That plan advocates moving business logic closer to the data in order to make it easier to provide standard and consistent ways to access information. "We have been attempting to get our development teams to think in this way for a while," he said.

Not everyone shares that view. For example, Rick Sadler, CIO at Hawaiian Electric Co. in Honolulu, said the power company makes only limited use of stored procedures in order to ensure database independence. Switching databases can be hard work for an IT shop that uses a database vendor's SQL extension to write stored procedures.

Scalability concerns are the main reason why First American Title Insurance Co. tries to keep business logic in the business services tier, according to Sue Binks, vice president of IT strategic product development at the Santa Ana, Calif.-based company. "We can always throw more servers into the pool to process the logic," Binks said.

Tyson Hartman, chief technology officer for the Americas region at Avanade Inc., a Seattle-based consultancy that is a joint venture between Accenture Ltd. and Microsoft, said it's easy to scale out application servers, whereas it can be challenging to do the same thing with database servers. "If you have a solution that requires significant scale, putting all the logic in the database has its limits," he said.

Sundial Software Corp. tries to maintain all of its business logic in the application layer, said Ethan Roberts, a software architect at the Madison, Wis.-based IT consulting firm. But database stored procedures built with .Net technologies could minimize network traffic for repetitive operations against a large number of data records, Roberts said. He noted that with the logic in a middle tier, the data would have to cross the network.

– CAROL SLIWA

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BRIEFS

IBM to Unveil First ODF-Based Product

IBM early next year will bring out software based on the Open Document Format for Office Applications to join other ODF-compliant offerings from Sun Microsystems Inc. and OpenOffice.org. IBM said it will add support for the ODF standard in Version 2.6 of its Workplace Managed Client application.

RSA Buys Online Security Vendor

RSA Security Inc. has agreed to buy Cyota Inc., a New York-based provider of online security and antifraud tools and services, for $14.5 million. RSA said the acquisition will enable it to offer a risk-based authentication package that allows customers to choose an authentication method to meet specific risks. RSA will also gain Cyota's antifraud service, which includes fraudulent site shut-down and detection of phishing attacks.

Red Hat to Offer Certified App Stacks

Red Hat Inc. has announced plans to fully certify and support three open-source stacks – a Web application stack, a Java Web application stack and an enterprise Java stack. The stacks, due early next year, will be available online via a subscription model through the Red Hat Network, according to the Linux vendor. All three will run on the company's Red Hat Enterprise Linux operating system.

iAnywhere Upgrades Its Remote DB Tool

iAnywhere Solutions Inc. has brought out a new version of M-Business Anywhere, its software for enabling remote access to corporate databases. Version 6.0 of the Sybase Inc. unit's product is designed to allow IT managers to remotely push software upgrades out to devices so individual users don't have to connect the device to a computer to download new software.

Mixed Systems Remain Common in Data Centers

Mainframe users withstand pressure to move apps to commodity servers

BY PATRICK THIBODEAU
LAS VEGAS

THERE WERE a few murmurs of surprise at Gartner Inc.'s annual data center conference here last week when more than 40% of the attendees who responded to a poll of the audience said mainframes are still part of their IT environments.

Many of the 2,000 or so conference attendees were from large companies that continue to rely on mixed installations of IT systems, despite being pushed by some vendors toward commodity servers. In fact, when the audience members at the kickoff keynote session were asked as part of the electronic poll whether they run their data centers on either Windows or Unix exclusively, only 4% said yes.

Abdul Khan, who manages servers and storage at Blue Shield of California, said the San Francisco-based insurer's mainframe setup supports custom applications that would be too difficult to move to other systems. "It would take a long time to change our software," Khan said.

Although users such as Khan may stick with mainframes to run legacy applications and to take advantage of the reliability of the systems, Bill Homa, CIO at Hannaford Brothers Co. in Scarborough, Maine, sees the mainframe as an ideal platform for ongoing software development.

Saving Money With Cobol

In a phone interview, Homa said Hannaford, a grocery chain with annual revenue of about $5 billion, continues to develop custom Cobol mainframe applications through Bangalore, India-based IT services provider Infosys Technologies Ltd. The company's software costs, including maintenance and development, are as much as 30% less than what it would pay for packaged applications, Homa said.

IBM last week announced that Hannaford was one of the first companies to install its System z9 mainframe, which became available in September. The z9 is one of two mainframes in the grocer's data center, which also includes about 200 servers running IBM's AIX version of Unix, as well as 250 Windows servers.

The z9 can process 1 billion transactions per day, more than double the capacity of IBM's older z990 system, which Hannaford also uses. In addition, IBM made architectural changes to the z9 that improve its ability to pull information from a database by about 30%, Homa said. That's particularly important because Hannaford employees use wireless devices to access the mainframe and place product orders on the spot in warehouses and stores.

But what Homa really likes about the z9 is its scalability. He's currently using only two processors on a system that can support up to 64 CPUs. "This machine is doing more work than [the] other 500 servers in the data center put together," he said.

IBM and other enterprise IT vendors are moving toward utility computing, in which companies can buy processing power as needed, thereby making the underlying hardware less important. But that trend is "a long way from reality for most of us today," said Gartner analyst Steve Prentice.

In the meantime, users will have to continue to push vendors to support standards that can improve the interoperability of heterogeneous environments, said Donna Scott, another Gartner analyst.

IT managers also have to contend with the ongoing introduction of consumer-oriented technologies into business operations. That includes instant messaging applications, Google Inc.'s desktop search tool and peer-to-peer voice technology from vendors such as Skype Technologies SA.

In another poll at the conference, 20% of the respondents said they have banned such technologies from end-user systems; 43% said they discourage the use of them, and 26% said they allow the technologies to be used but don't support them. The remainder either encourage or actively support the use of such technologies.

Prentice said that ultimately, "you cannot stop consumer-grade technology from entering the enterprise," especially if IT managers want to keep their environments attractive to knowledge workers.

Users Seek Validation on Server Consolidation

LAS VEGAS

IT MANAGERS at last week's data center conference here packed a presentation on server consolidation, just as they have at similar events in the past. Attendees such as Alfred Masse were seeking to compare their own consolidation experiences with the results of a survey that Gartner conducted on the topic last summer.

Masse, who is the infrastructure and operations manager at Addison Avenue Federal Credit Union in Palo Alto, Calif., said he was reassured after he saw the survey results. "It revalidates our strategic planning," he said.

For example, the survey of 400 companies worldwide found an average cost savings of 16% from server consolidation projects. That's in line with what Masse is expecting from Addison Avenue's project – savings in the range of 15% to 20% once the credit union's consolidation work is completed over the next year.

The physical consolidation is done, he said, adding that the next step will be to virtualize many of the company's systems and try to increase their utilization rates.

Gartner analyst John Phelps cautioned that savings from consolidation projects can vary considerably, depending on the size of the company and the scope of the project.

And although the survey showed that a desire to reduce total cost of ownership is the major driver behind consolidation initiatives, it isn't the only one, Phelps said. He noted that respondents also cited improving control over IT service levels and reducing server sprawl as leading reasons for consolidating their systems.

According to Gartner, more than half of the savings realized by users that consolidate servers revolve around hardware, with smaller savings resulting from staff reductions or reassignments, decreases in facilities costs and software changes.

Phelps said internal politics is one of the major hurdles on consolidation projects, with 33% of the survey respondents citing it as a key issue. Providing adequate bandwidth was the top issue, cited by 45% of the participants. But Phelps said the bandwidth problems may reflect unique challenges faced by companies overseas.

– PATRICK THIBODEAU

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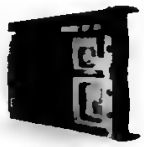

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GLOBAL DISPATCHES An International IT News Digest

Intel Pledges Increase In Its India Investments

DELHI, INDIA

INTEL CORP. last week said it plans to invest more than $1 billion in India, including $250 million that will be put into a venture capital fund to help stimulate technological innovation and drive growth for the country's IT industry.

The company said it will also spend $800 million over the next five years to expand its research and development center in Bangalore, as well as its marketing, education and community programs in India.

The announcement was made during a visit here by Intel Chairman Craig Barrett. It came less than a week after Hector Ruiz, chairman, president and CEO of rival Advanced Micro Devices Inc., said that AMD will license its process technology to an Indian consortium for use in a planned $3 billion semiconductor fabrication plant. Intel hasn't announced any chip manufacturing plans for India.

■ JOHN RIBEIRO, IDG NEWS SERVICE

GLOBAL FACT

The percentage of Swedes who are covered by 3G wireless communications services, surpassing levels in the U.K. (75%) and Italy (60%), for the broadest coverage in Europe

Microsoft Moves to Add, Upgrade R&D Centers

NEW DELHI

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The plan was announced during the Microsoft Government Leaders Forum Asia here. The 90 centers will include about 60 existing facilities in countries such as Australia, Brazil, China, Germany, Japan and Malaysia. Thirty new facilities will be built in South Korea, India, South Africa and other countries.

The existing facilities will be upgraded in 2006, and the new ones are due to open during the course of the year, said John Fernandes, Microsoft's director of international business development.

Separately, Microsoft announced plans to invest $1.7 billion in India over the next four years. Chairman and Chief Software Architect Bill Gates told reporters in New Delhi that the funds will be spent on Microsoft's development operations and in other areas.

■ MARTYN WILLIAMS AND JOHN RIBEIRO, IDG NEWS SERVICE

U.K. Tax Agency Shuts Portal Due to Cyberfraud

LONDON

THE U.K.'S tax authority shut down a tax-credits Web site earlier this month, and a criminal investigation is under way concerning possible identity theft, a spokesman for the agency confirmed last week.

HM Revenue & Customs (HMRC) said in a statement that its staffers had identified and stopped attempts to commit fraud during compliance checks on the tax-credits portal. New measures are being developed to ensure that the site is secure, the agency said.

The attempted fraud involved internal information about workers at the government's Department for Work and Pensions (DWP), the HMRC spokesman said.

The criminal investigation revolves around the apparent use of a number of DWP employees' identities in fraudulent tax-credit claims. Because the criminal investigation is ongoing, further details on the matter can't be released, the spokesman said.

■ JEREMY KIRK, IDG NEWS SERVICE

Nokia, Supplier Trade Barbs Over Pact

ESPOO, FINLAND

NOKIA CORP. last week denied acting unfairly toward a Taiwan-based supplier of Digital Subscriber Line technology that has publicly berated the mobile phone maker over its contracting practices and the recent cancellation of a product order.

YCL Electronics Co. in Feng Shan City claims that its contract with Nokia is unfair because the agreement allows Nokia to cancel any order without liability two weeks prior to the delivery date. That clause leaves YCL vulnerable because it has to pay for the product materials far ahead of time, the company said.

Espoo-based Nokia responded by defending its contract language and citing quality problems with some equipment supplied by YCL. Nokia believes that the contract is a standard one and that it has acted properly, said Thomas Jonsson, director of communications for the company's operations in Beijing.

Andy Lu, vice president of sales at YCL, said the company resolved a product quality problem with Nokia in April.

■ DAN NYSTEDT, IDG NEWS SERVICE

South Korea Orders Changes in Windows

SEOUL

SOUTH KOREA'S antitrust regulatory body last week fined Microsoft 33 billion won ($32 million U.S.) for violations of fair trade regulations and ordered the software vendor to modify Windows.

The South Korea Fair Trade Commission is requiring Microsoft to offer two versions of Windows in the country — one without its Windows Media Player and MSN Messenger software, and another that includes links to Web sites where users can download comparable products offered by competitors. Also, Microsoft must provide existing Windows users with CDs that will enable them to replace Media Player and MSN Messenger, the agency ruled. The commission found that tying such products to Windows constitutes "abuse of a market-dominant position and unfair trade practices," said Fair Trade Commission Chairman Kang Chul-kyu.

TOM BURT Microsoft to appeal Korean ruling

"We are very disappointed at the commission's decision," said Tom Burt, vice president and deputy general counsel at Microsoft. The company plans to appeal the ruling, he added. However, Microsoft officials backed away from previous hints that the company might pull Windows from the Korean market.

Unless it gets a court order staying the required remedies, Microsoft has 180 days from the date it receives the ruling to make the changes, according to the Fair Trade Commission.

■ ANDREW SALMON AND DAN NYSTEDT, IDG NEWS SERVICE

Page compiled by Mike Bucken.

Briefly Noted

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■ COMPUTERWORLD TODAY (AUSTRALIA) STAFF

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■ RODNEY GEDDA, COMPUTERWORLD TODAY (AUSTRALIA)

GLOBAL

An International IT News Digest

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■ RODNEY GEDDA, COMPUTERWORLD TODAY (AUSTRALIA)

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Growing Nevada County Starts $62M App Overhaul

Clark County replaces mainframe software with mySAP ERP suite

BY STACY COWLEY
LAS VEGAS

FIVE THOUSAND new residents show up in Nevada's Clark County every month chasing the Las Vegas dream.

The sprawling county covers an area the size of New Jersey, has a population of 1.7 million and until late this year was running its government agencies using a mishmash of aging mainframe applications.

On Nov. 1, 40 Clark County agencies went live with a host of financial modules from SAP AG's mySAP ERP 2004 suite, completing the first phase of a massive ERP overhaul that Clark County CIO Rod Massey says is on time and on budget.

Clark County has spent $26.2 million so far to get the SAP financial software up and running, and it expects to have spent $38 million for the entire project by the time it completes Phase 2 late next year. The second phase adds human resources and payroll applications to the mix.

User-friendly

The county selected SAP in 2004 after a stringent evaluation that also involved Oracle Corp., PeopleSoft Inc. and several smaller vendors. SAP wasn't the low bidder, but the breadth of its software offerings and their user-friendly look and feel helped it win the business, Massey said.

Public-sector ERP overhauls often make headlines when the projects devolve into expensive debacles.

Massey attributes Clark County's success so far to tight governance, which Steve Peck, president of the SAP Public Services Inc. unit, agreed was "really spot-on." Massey also cited the project team's close partnership with SAP and systems integrator IBM.

While the overall project has met its goals to date, unexpected hurdles have popped up along the way, Massey said.

"It's amazing the amount of time it can take to work through a particular business process flow," Massey said, noting the need for staff education and training. "If I were to give others one suggestion, it's that you can't overemphasize the training. I think that the technology is the easy part," he said.

> **"We started with the back office because we didn't want to create a nice pretty front end that the back end couldn't live up to.**
>
> **ROD MASSEY,** CIO, CLARK COUNTY, NEVADA

Phase 1 of Clark County's project required that 2,600 county employees in 40 different agencies be trained to use the new assortment of SAP financial applications. After that, the county plans to begin revamping its public Web sites to enable online processing of citizen transactions such as applying for business licenses.

"We started with the back office because we didn't want to create a nice pretty front end that the back end couldn't live up to," Massey said.

Among the systems Clark County will toss out is a 15-year-old, green-screen DecisionMaster financials system; the county court's equally aged Blackstone case management software from CMC Software Inc. in Nashua, N.H.; and the J.D. Edwards ERP backbone at McCarran International Airport.

Migrating to a standardized SAP ERP implementation will free up the county IT staff to focus on rolling out new services rather than maintaining legacy systems, Massey said. ▸

Cowley is a reporter for the IDG News Service.

Microsoft Ships Belated CRM Update

Users wary of the first major upgrade in three years

BY STACY COWLEY

Microsoft Corp. last week began shipping Microsoft Dynamics CRM 3.0, the first major update to the CRM software Microsoft launched three years ago.

The new version fills functionality gaps that had left Microsoft lagging behind its midmarket CRM rivals.

Customers who bought Microsoft CRM soon after its launch have had a long, often frustrating wait for substantive improvements. Microsoft put out a point release in December 2003, to fix glitches and add a few features, but it scrapped a planned 2.0 version to focus on developing 3.0.

Door maker Designer Doors Inc. bought and deployed Microsoft CRM several years ago but put the software back on the shelf after running into a host of problems. The most painful were synchronization glitches that kept the software's features from being available to remote workers.

"We had put a lot of effort into making this our centerpiece for sales and marketing," said Michael Kruger, information systems manager at the River Falls, Wis.-based company. "It's been expensive for us to find work-arounds."

Kruger plans to spend at least six months testing CRM 3.0 before redeploying Microsoft CRM. Meanwhile, Designer Doors is making do with homegrown applications.

"We intend to evaluate it carefully to see if the changes that we need have been made," he said. "We have attended some preliminary demos, and the issues that we had appear to have been addressed."

Glitches Fixed

The update adds an automation module for direct marketing and a service module to coordinate staff schedules. It also fixes glitches that had frustrated customers, such as the synchronization technology for remote users.

Microsoft partner Mike Snyder, principal at Chicago services firm Sonoma Partners LLC, cited improved Outlook and Office integration and the ability to add custom entities to Microsoft CRM as two of the most useful enhancements.

The new CRM software and Outlook share a nearly identical look and feel, according to those who have seen early demonstrations of Version 3.0, Snyder said.

"You really can't tell where one ends and the other begins," added Bruce Richardson, an analyst at Boston-based AMR Research Inc.

Microsoft is tweaking its packaging for this release, offering Small Business and Professional Editions. The Small Business Edition is designed to run on Microsoft's Windows Small Business Server, which has a 75-user cap and offers tools for migrating from Microsoft's Business Contact Manager software.

Microsoft sells Dynamics CRM through its Volume Licensing program, with prices ranging from $440 per user for the Small Business Edition to $1,761 per server for the Professional Edition. ▸

Cowley is a reporter for the IDG News Service.

Microsoft, SAP to Test Mendocino

LAS VEGAS

SAP AG and Microsoft Corp. are about to release to 40 early adopters the first version of their jointly developed integration product, code-named Mendocino.

Mendocino, which SAP first disclosed at its Sapphire show in April, aims to link SAP's back-office ERP systems with Microsoft's ubiquitous Office software. The integration will let customers use the familiar Microsoft user interface to work with back-office corporate data.

The first full version of Mendocino is scheduled for general release in July. The first beta release will ship to early adopters later this month.

SAP showed off Mendocino in an early demo at an SAP industry analyst meeting here last week.

AMR Research Inc. analyst Bruce Richardson said he expects early Mendocino functionality to be limited. "To me, the real killer app for this is CRM, and that won't be in the first version," he said.

Some analysts at the meeting said the Mendocino project looks like a big win for SAP and a potential complication for Microsoft. One of the biggest selling points for the Microsoft applications is their integration with Office. If SAP can also boast of Office integration, it could weaken Microsoft's pitch. "Microsoft is losing one of the advantages they wanted for themselves," said Josh Greenbaum, principal analyst at Enterprise Applications Consulting Inc.

Even so, if Mendocino helps users draw more value from Office, Microsoft does stand to benefit, analysts said.

SAP executives refused to discuss pricing for Mendocino, but Richardson said he expects it to be lower overall than SAP's traditional per-user software licensing fees.

—STACY COWLEY

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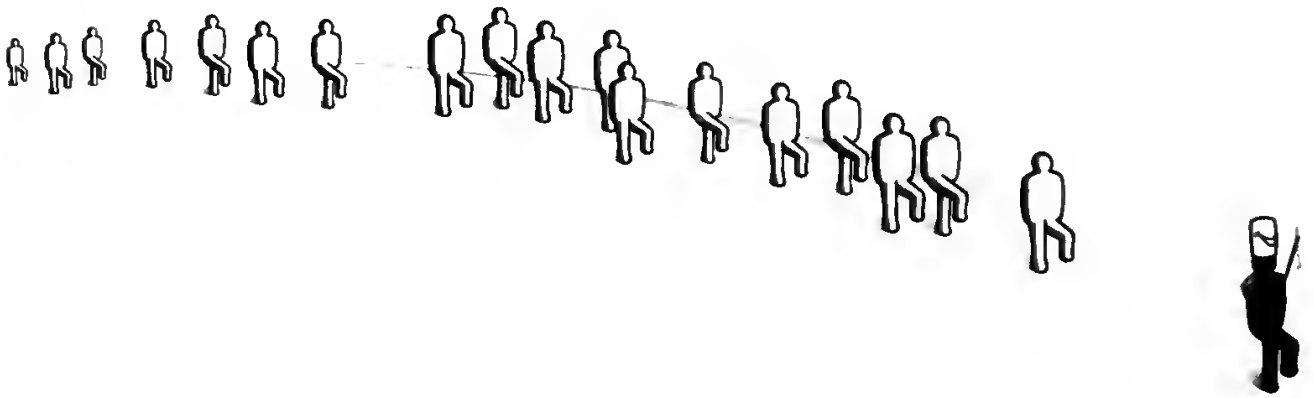

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Computech Agrees to Pay $2.25M in H-1B Worker Case

Company will pay workers back wages and a fine to settle federal complaint

BY PATRICK THIBODEAU

COMPUTECH CORP. late last month agreed to pay $2.65 million in back wages and fines to settle a U.S. Department of Labor complaint that it underpaid workers from overseas.

The company, which is settling the dispute without admitting to any of the allegations, agreed to pay $2.25 million in back wages to employees in amounts ranging from less than $2,000 to more than $40,000.

The settlement may be the largest back-wage payment ordered under the federal H-1B visa program, according to Brad Mitchell, a Labor Department spokesman.

Opponents of the H-1B program argue that foreign workers that companies bring in for high-tech positions are taking U.S. jobs.

However, Computech President Ram Kancharla said the company hired the workers during the technology boom years to meet the need for workers with Java- and Web-related skills.

Kancharla wouldn't disclose the number of H-1B workers the company now uses but said most of the employees involved in the settlement have left the firm.

Workers Abroad

Computech, which handles ERP implementations, application support and development, and remote database management, today has 400 to 500 employees in the U.S. and India, with more than 200 of those based in the U.S.

According to the settlement, the company can't hire H-1B workers for 18 months.

Kancharla, who denied the federal allegations, said the company decided to settle after looking "at the cost of litigation and how long it's going to take and the kind of distraction to the business."

Some companies that have hired large numbers of H-1B visa holders have been accused by groups representing technology workers of being "body shops" that underpay foreign workers and help U.S. companies move work overseas.

"The Department of Labor aggressively enforces the law to ensure that temporary foreign workers are compensated fully and fairly," Secretary of Labor Elaine L. Chao said in a statement. "Abuse of the temporary foreign worker program is not tolerated, and violators, as this case shows, are vigorously pursued."

Spot Audits Needed

But Ron Hira, vice president of career activities at The Institute for Electrical and Electronics Engineers Inc. in New York and an assistant professor of public policy at the Rochester Institute of Technology, argued that the government's enforcement mechanism is weak because it relies on complaints from H-1B workers.

> **"Abuse of the temporary foreign worker program is not tolerated, and violators, as this case shows, are vigorously pursued."**
>
> ELAINE L. CHAO, U.S. SECRETARY OF LABOR

The Department of Labor doesn't have the power to make spot audits of companies, but Hira said the agency needs to be able to do that if it is to be proactive about such cases.

Hira said the settlement is something of a disincentive for H-1B workers because it took six or seven years to resolve and is no windfall for the workers affected.

However, Vic Goel, an immigration attorney in Greenbelt, Md., said the Labor Department action is "a clear indication that the system is working effectively."

The H-1B program has been the subject of heated contention. Opponents argue that the program is used to hire cheap labor and facilitate the offshoring of U.S. jobs. Supporters contend that foreign workers are necessary in order to meet U.S. labor needs and keep jobs in the country.

A report released last month by the Government Accountability Office won't settle that argument. The report's so-called overview of the issues reached no firm conclusion about the effects of offshoring on the U.S. economy.

University of Maryland to Build Military Supply Chain Prototype

Looks to help return equipment to battle quickly

BY LINDA ROSENCRANCE

The U.S. Department of Defense has awarded a $2.1 million grant to the University of Maryland to develop a prototype Web-based interactive supply chain system for the military.

The goal of the 12-month project is to get repairable military equipment back into battle as soon as possible and at a lower cost.

"It's a technical demonstration to improve the maintenance and readiness of a very important aircraft, the F/A-18 Navy fighter jet," said Kenneth Gabriel, senior research scholar at the University of Maryland Center for Public Policy and Private Enterprise.

Gabriel is the engineer and policy expert serving as principal investigator on the project.

The developers will integrate several technologies to demonstrate that the aircraft can be maintained more efficiently by using wireless communications; predictive algorithms, or prognostics; and automatic identification technologies such as radio frequency tags, smart cards and biometric systems. The technologies would be linked to the transportation, distribution and acquisition of parts needed to repair equipment or enable a mission to proceed, Gabriel said.

"It's an IT network that uses technology in [those] three areas," Gabriel said. Integrating these pieces through a secure Web portal "will enable the Navy to do the mission better" by making an aircraft available at a lower cost, he said.

Pulling all these technologies together in a military context can add efficiency, flexibility and maneuverability to U.S. forces, said Jacques Gansler, director of the university's Center for Policy and Private Enterprise. Gansler was undersecretary of defense for acquisition, technology and logistics in the Clinton administration.

Unique Prognostics Use

A unique element in the proposed system's technological chain is the use of prognostics — the warning systems built into the F/A-18s and other advanced military hardware that can detect unusual mechanical performance and analyze a likely cause, Gabriel said.

"The goal is to develop sensors within the platform — in this case, the F/A-18 aircraft — to detect failures and to broadcast the failures to the maintenance crew before the aircraft lands" on an aircraft carrier, he said.

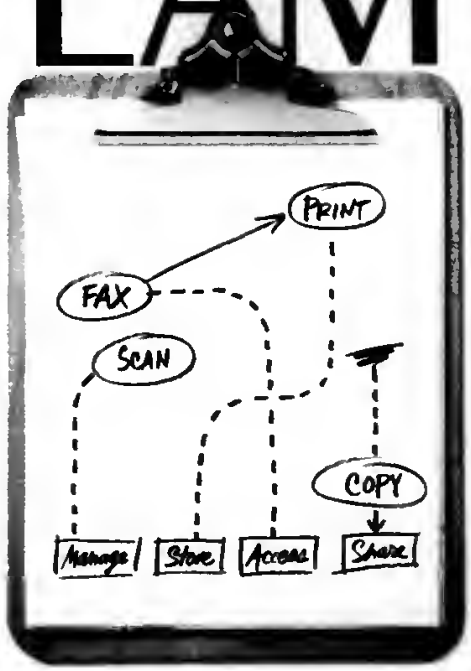
That gives the carrier's crew "enough time to understand where that landing aircraft ought to be located on the shipboard, or to be prepared for what is needed to repair the aircraft very quickly, if that's possible, so they'll have better management of the fleet activities," Gabriel said.

If the project is successful, the U.S. Navy could use the system to improve logistics support for its entire fleet, according to Gabriel. He estimated that the effort could save the military tens of millions of dollars.

"If we get smarter about what we put into the supply chain, we can help transform the way military units operate," says William Lucyshyn, co-investigator on the project and director of research at the Center for Public Policy and Private Enterprise.

"With the F/A-18s, the goal is to reduce the downtime and maximize the fighting force — while still reducing the support costs," Lucyshyn said. "This can make a significant difference in military effectiveness."

TEAM PLAYER



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HP Unveils Dashboard Tool at French Event

Financial firm uses early release in a pilot of an online trading system

BY MATT HAMBLEN

Hewlett-Packard Co. last week unveiled OpenView Dashboard, which is designed to let users quickly create views of complex systems to monitor the health of business services.

The offering was brought out at HP's Software Universe event in Nice, France, along with a new version of OpenView Business Process Insight and other tool revisions.

The dashboard, priced from $60,000, will start shipping in the first quarter of next year.

Bill Emmett, manager of OpenView advocacy at HP, said the product allows IT managers to create views of systems based on various criteria within a matter of minutes instead of days or weeks.

'Quick and Adaptive'

A major U.S.-based financial services firm has been using a prerelease version of the dashboard for a pilot online trading project over the past two months, said the company's vice president of architecture and engineering, who asked not to be identified. The system will be fully deployed next year, he said.

The dashboard has been flexible in providing information about systems used to support online trading, he said. "It's been quick and adaptive," he said, pointing to one case where a view of a process was revamped to reveal other information in only a day — far less time than it took in the past.

"We support 70 different business units and deal with 30 of them daily, and not all 30 are going to want a plain-vanilla dashboard view that I put out," the vice president said.

For some time, the company's internal developers have built dashboards to get comprehensive views of parts of the business, a process that can take months.

"Dashboards are important to us to take that summary in a usable format, but creating them has been one of [our] biggest challenges," he said. "Now we have something with scalability and flexibility."

The financial services company executive said he was initially concerned about the cost of packaged systems, estimating the value of his firm's configuration of the HP dashboard tool at about $250,000.

However, he said, the packaged system was "far more cost-effective," taking only a month to set up. In comparison, it took six months to create dashboards internally.

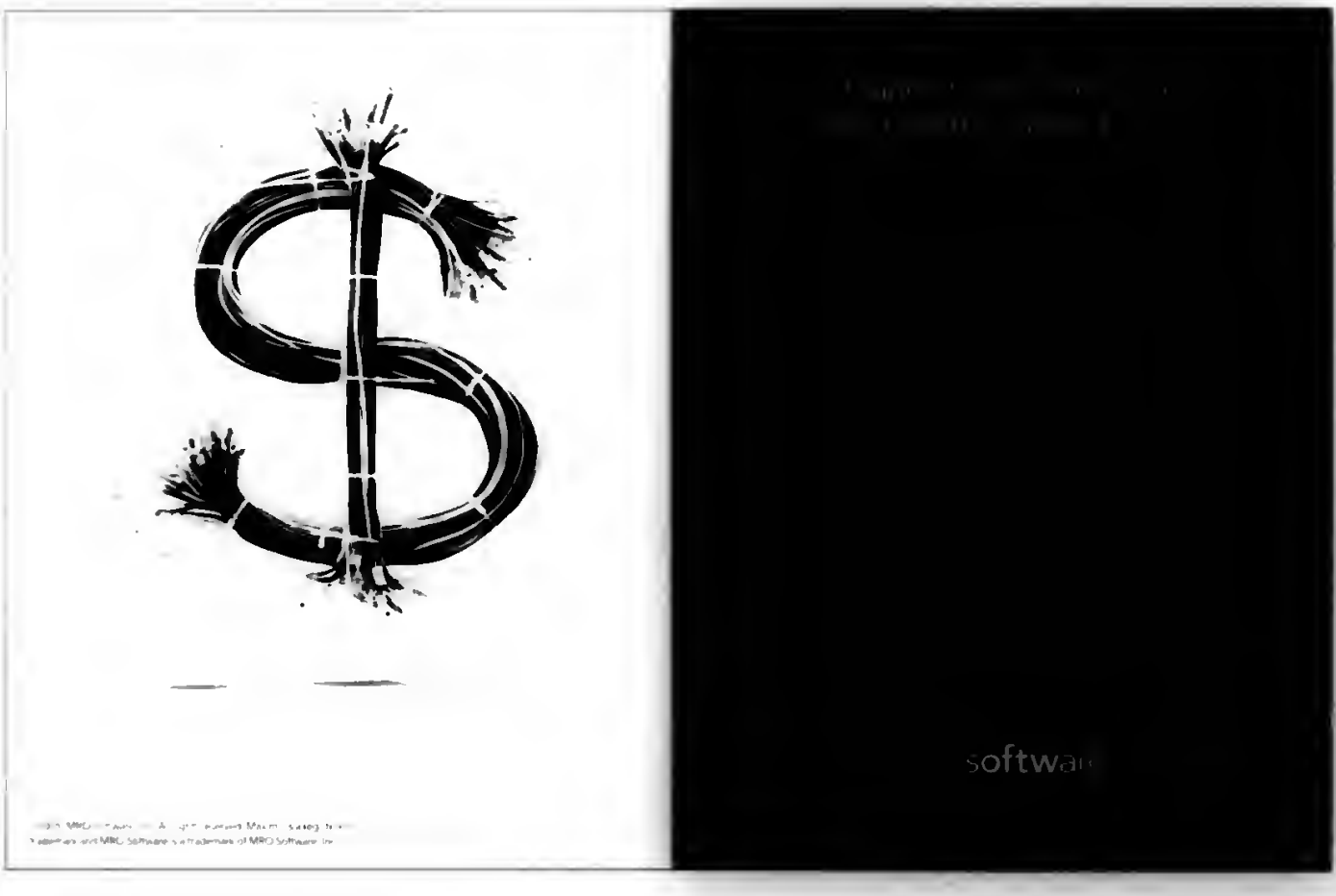
HP last week also released OpenView Service Desk 5.0 and OpenView Business Process Insight 2.0, which can monitor and report on predefined business processes. ▸

NEW HP OPENVIEW PRODUCTS

DASHBOARD 1.0
Can develop views of services within systems in a single view or dashboard and can link to OpenView Service Desk for information related to outages and other problems. Priced from $60,000; the product ships in the first quarter of 2006.

BUSINESS PROCESS INSIGHT 2.0
Can define business service objectives and provide real-time monitoring and reporting on the health of the infrastructure behind business services. Pricing wasn't disclosed; the product ships in the first quarter of 2006.

SERVICE DESK 5.0
Gathers information from unified configuration management database to help handle service desk calls and resolve system problems. Pricing is based on service-level agreements; the product is shipping now.



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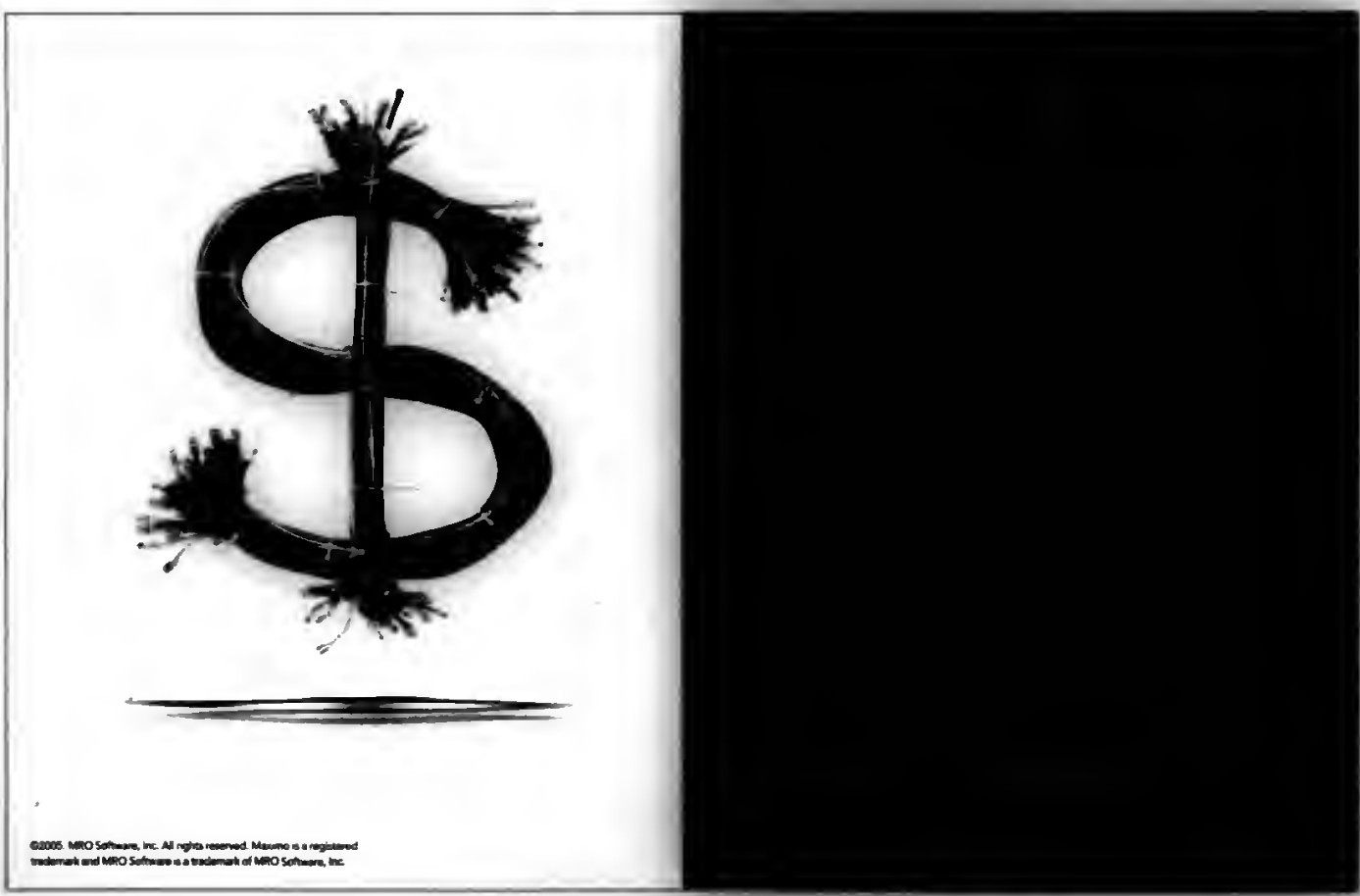
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IT LEADERS

WHAT'S INSIDE

"The easy part is the technology. The truly hard effort is defining needs, creating a vision that others can understand and embrace, and then developing a road map to achieve that vision."
DIANAH NEFF, CIO, CITY OF PHILADELPHIA

"IT can always build the most colossal Ferrari for any solution, but that's not always what's needed. Sometimes what's needed is a Volkswagen or a bicycle."
ANDRES CARVALLO, CIO, AUSTIN ENERGY

"You need to be assured you've got real buy-in and that it's not superficial."
FRED GARRACH, VICE PRESIDENT OF GLOBAL TECHNOLOGY, XL GLOBAL SERVICES INC.

"There are just some people you see and know instantly that they're worth investing in."
BILL REGEHR, SENIOR VICE PRESIDENT OF IT AND CIO, BOYS & GIRLS CLUBS OF AMERICA

EDITOR'S NOTE

Defining Leadership

WHAT CONSTITUTES IT leadership? What milestones must an IT executive reach to achieve that status? What recognition or position must he attain in order to become a leader in a profession that counts among its members some of the most dynamic and innovative individuals any of us will ever encounter?

I found the answers to those questions in my own recent encounters with some of those individuals. Last month, I asked a favor of several CIOs in the San Francisco Bay area. IDG, *Computerworld*'s parent company, was holding a meeting of its editors from around the world, and I asked the CIOs to talk to us about their professional concerns and about how we as journalists can do a better job of delivering the information they need.

Two of the people who dropped everything to come by were Satish Ajmani, CIO of Santa Clara County, Calif., and Sateesh Lele, chairman of Global Data Systems USA and former CIO at Frito-Lay and Avon Products. Their message was clear: More than anything, they want no-holds-barred accounts of enterprise technology applications — not vendor "success stories," but the actual experiences of their peers, warts and all, so that they can learn how real-world IT problems are solved.

A couple of weeks earlier in Orlando, another group of IT professionals had gathered at a *Computerworld* summit on conquering IT complexity. Addressing the issue were Dan Agronow of The Weather Channel, Frank Enfanto of Blue Cross and Blue Shield of Massachusetts, Allan Frank of Answerthink, Louis Gutierrez of the University of Massachusetts Medical School, and Joe Puglisi of Emcor. Their candid accounts of dealing with IT complexity were an intriguing precursor to the message that would be delivered by their peers in San Francisco.

Ajmani, Lele, Agronow, Enfanto, Frank, Gutierrez and Puglisi are IT leaders because they do what IT leaders do: They sacrifice their time and share their knowledge and experience to serve the IT profession. All these individuals have something else in common: Each one of them is a past Premier 100 honoree.

Each of them can take heart in the fact that this year's class of Premier 100 IT Leaders has continued that tradition of selfless service — of giving back to the profession. Many serve as mentors, nurturing the next generation of IT leaders.

Kay Palmer of J.B. Hunt Transport Services uses mentoring and coaching to teach promising employees technical, business and diplomatic skills because, she explains, very few leaders naturally possess all three.

John Schindler of Kichler Lighting has a process in place to identify "fast-track individuals," and he monitors their development. "I know the individuals I'll be grooming and investing time in," he says.

Bill Regehr of Boys & Girls Clubs of America is determined to give back as well. "A lot of people invested in me," he says. "I owe it to the next generation to pass that on."

We extend our heartfelt thanks and congratulations to Palmer, Schindler, Regehr and the rest of this year's Premier 100 IT Leader award recipients. In doing so, we recognize, as they do, that it's not what an IT professional receives that makes him a leader. It's what he gives.

Don Tennant

SCOTT WEBAUER

Agile BY DESIGN

Fast-moving IT is backed by steady and deliberate planning. **BY JULIA KING**

WHEN DIANAH NEFF was appointed CIO of Philadelphia in 2001, the country's fifth-largest city had virtually no IT governance in place. Decisions were made but not always executed. Goals were set, but projects were never initiated.

Today, in contrast, Neff's charter and responsibilities as CIO — as well as those of the city's 460-person IT department — are clearly laid out. IT supports 52 city departments and agencies. IT program managers have been appointed to oversee the relationship between IT and clusters of similar departments, such as public safety and public works. Neff reports directly to the mayor and serves on his cabinet.

Neff is also the driving force behind Wireless Philadelphia, an ultra-high-profile, fast-moving, multimillion-dollar project to build the biggest municipal wireless Internet system in the country. First announced in April 2004, the project is on time and well under budget (EarthLink Inc. recently agreed to construct the system at no cost to the city), and five neighborhood pilots are up and running. The 135-square-mile network, which will provide inexpensive high-speed Internet access to everyone citywide, is scheduled to be fully operational by the end of next year.

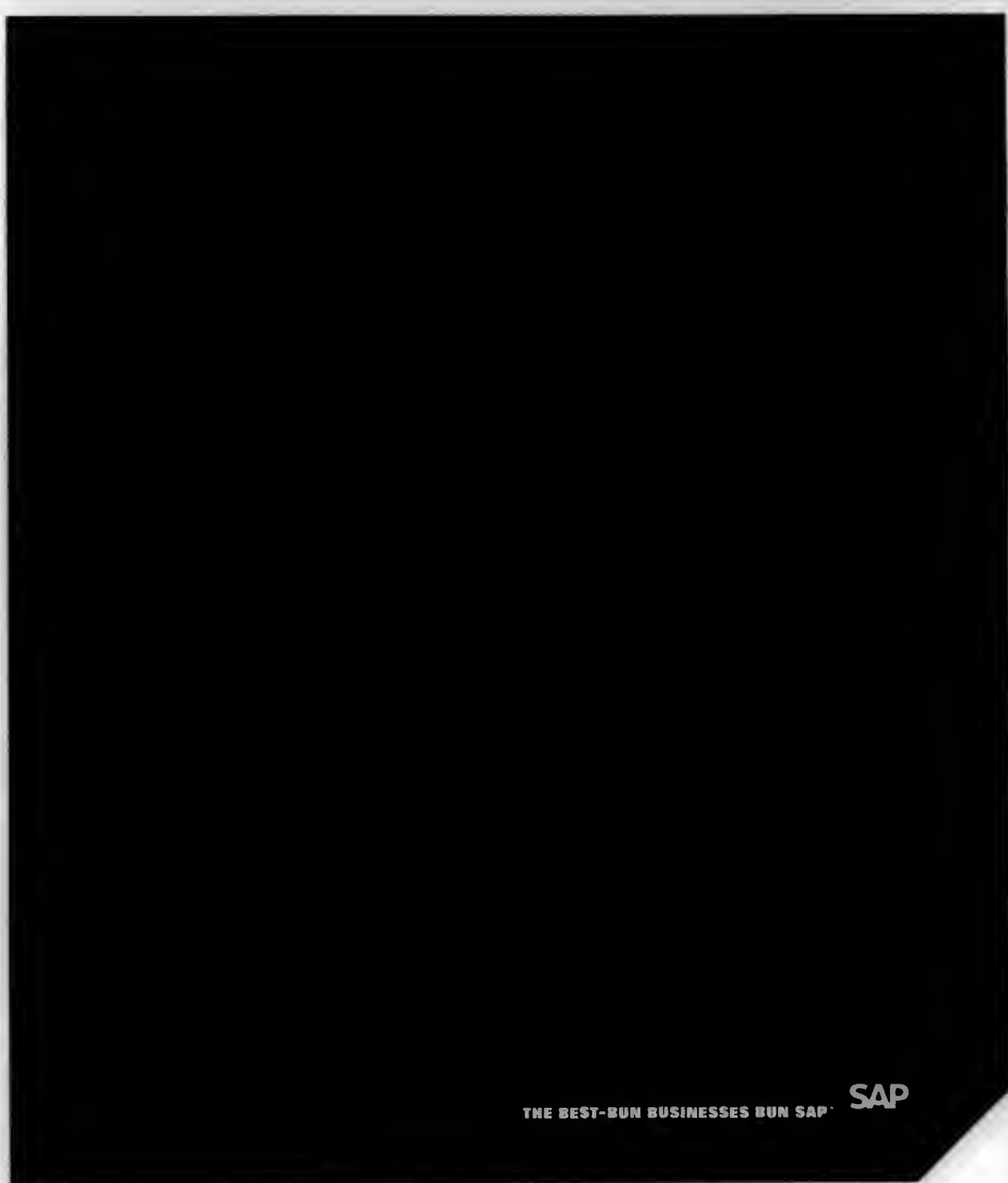
"The easy part is the technology," Neff says. "The truly hard effort is defining needs, creating a vision that others can understand and embrace, and then developing a road map to achieve that vision."

As counterintuitive as it seems, it's this kind of methodical planning and relentless communication, coupled with the adoption of standard processes and procedures, that works to breed agility, according to Neff and several other of this year's Premier 100 IT Leaders. In other words, agility is very much a matter of design.

THOUGHTFUL SPEED

"There's some misconception about agility. It's not just about changing rapidly," says Earl Monsour, director of strategic information technologies for the Maricopa County Community College District in Tempe, Ariz. "It's about responding quickly and appropriately, which requires having a long-range plan in place at all times. With a plan, you can make adjustments as technol-

Continued on page 32



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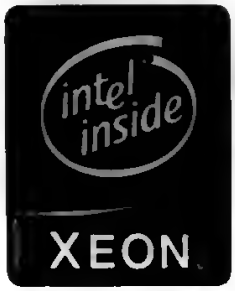

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Continued from page 28

ogy changes and business opportunities arise, rather than reinventing the wheel each time change occurs."

Maricopa's long-range plan to overhaul its core WAN, which supports the district's 10 colleges, is a prime example. For the past two years, Monsour continually talked about the need for a major network upgrade and the plan for making that happen. During that time, the college district's IT organization successfully implemented several network enhancements, including a network load-balancing system and two storage-area networks.

These projects worked to boost executive confidence in the larger network overhaul proposal, and when it came time to formally request the budget to perform the overhaul, "we had approval for that major investment within a month," Monsour says. "The reason is because we had planned and communicated our plan so much beforehand. The plan constantly has to be communicated. It just can't sit on the shelf."

Premier 100 honoree and Lafayette Consolidated Government CIO Keith Thibodeaux firmly believes that by identifying and standardizing certain technology and business process frameworks, Lafayette is better able to collaborate with other governmental and nongovernmental entities, which is critical to its own organizational agility. Frameworks take into consideration systems and organizational interdependencies, required IT and business skills, and the long-term costs and ROI of IT.

Using the framework approach, Lafayette Consolidated Government is working with five universities in the state and the Louisiana Optical Network Initiative to create its own research network that will support the $20 million Louisiana Immersive Technologies Enterprise Center.

The center's 3-D technology is used by the oil and gas industry to model seismic data and reservoirs. But for most of the region's small and medium-size independent oil and gas companies, the technology was out of financial reach. So Lafayette's Economic Development Authority stepped in, along with Silicon Graphics Inc., to create an immersive visualization facility.

"We think of this as a co-op model. We can give the oil and gas companies the same competitive technology [as the large oil companies, most of which have moved to Houston], but no individual company has to spend the money for it," Thibodeaux explains.

Under a proposed utility computing model, Lafayette Consolidated Government, which already owns and operates its own electric utility company, is also planning to run fiber network connections directly to every home and business in Lafayette.

"Technology and moving a lot of data around is central to our economy. We have to position our city as unique in its bandwidth capabilities. For us, it's pure economic development," Thibodeaux says.

AGILITY INGRAINED

Don Gibson, managing director of IT at FedEx Services in Irving, Texas, considers collaboration and communication to be the very lifeblood of the overnight transportation and shipping company. "At FedEx, we look at agility as an absolute," Gibson says. "We have to be as agile as our business partners."

Agility IS...

> **"...the ability to respond quickly but appropriately. You have to have put in place standards and processes to make fast but controlled responses. In addition, you have to be able to think in flexible terms. Agility requires you to step out of a black-and-white mode and to see multiple options, which you need to weigh, then make a choice that accomplishes your goals.**
>
> **EARL MONSOUR**, DIRECTOR OF STRATEGIC INFORMATION TECHNOLOGIES, MARICOPA COUNTY COMMUNITY COLLEGE DISTRICT

> **"...striking a balance between freedom, innovation and return on investment. It's about giving people ownership [of technology] and letting them do innovative things but sticking within a framework that lets IT address budget constraints and interdependencies.**
>
> **KEITH THIBODEAUX**, CIO, LAFAYETTE CONSOLIDATED GOVERNMENT

> **"...the ability to react quickly and make changes to the things both you and your staff attend to. It's about changing priorities in a fairly quick manner.**
>
> **BOB HOLSTEIN**, CIO, NATIONAL PUBLIC RADIO

> **"...an absolute. To be agile with customers, to communicate and collaborate with them, you have to understand their business.**
>
> **DON GIBSON**, MANAGING DIRECTOR OF IT, FEDEX SERVICES

By way of example, Gibson cites a recent customer win that involved luring a very large, 25,000-user company away from one of FedEx's top competitors.

"We did it by getting this customer fully set up and integrated into our systems in 60 days. Normally, it's a process that takes six months," he says.

"We did around-the-clock development and testing, working nights and weekends," Gibson explains. "We have that kind of culture here. It's one that expects, recognizes and rewards agility." Indeed, the project won an internal "hall of fame" award at FedEx Services, he notes.

Not surprisingly, Premier 100 IT Leaders also apply the concept of agility by design to how they train their staffs and groom next-generation IT leaders.

At National Public Radio in Washington, CIO Bob Holstein continually encourages his staff to take risks, make mistakes and learn from them. "The primary impediment to agility is people being locked into a certain way of doing things," he says.

So in 2004, when Holstein came to NPR as its first CIO and vice president for IT after eight years at Capital One Corp., one of the first things he did was change the way the IT staff interacts with NPR's IT users, particularly those in the newsroom, who he says are always frantically rushed and have no attention span for hashing out new system requirements with IT developers.

"Instead, we applied a development process akin to extreme programming. We would put something in front of the users [without their input], who would then tell us if we were pointed in the right direction," Holstein explains. "In the process, we came to understand their business processes much better and faster than if we had sat down in a traditional [joint application development] session."

The result is a working prototype of a much more efficient system for tracking the assignment, production and archiving of news stories.

"Being able to adapt your communication style to the peculiarities of the business needs and certain users is absolutely critical to agility," Holstein says. "At NPR, we have some of the most brilliant folks in journalism in the newsroom, and the news is our bread and butter. That said, many of them tend to be computerphobic, yet they're at very senior levels of the organization. I just can't overemphasize the importance of adaptable communication skills to overall agility."

REPRIORITIZING SKILLS

As IT leaders focus on the communication, business, financial and political skills they deem essential to agility, they also are actively de-emphasizing other skills, notably technical expertise.

Maricopa's Monsour, who launched his IT career over 30 years ago as a computer technician, now lists business and financial expertise among his top IT leadership skills. When the county's taxpayers recently approved a $951 million bond issue, a good chunk of which will go toward enhancing IT, Monsour was thrilled yet doubly challenged. The reason is that the bond is approved for capital spending only.

"Now the challenge is growing IT and maintaining the high level of support and customer service with no increases in operating costs," he says.

Philadelphia's Neff says, "I don't have the technical depth that I used to have. I no longer consider myself a technical expert." But she has had to become very much a political expert.

In both government and the corporate sector, "CIOs are required to be more politically savvy. You have to be sensitive to the community and where the history is and to finding key players from whom you need to take your lead, rather than dictating projects from above," she says. Had she not approached her leadership role in this way, Wireless Philadelphia might never have happened.

"If I had just been focused on IT and reducing the cost of service delivery," Neff says, "I may have missed this opportunity altogether."

Masters OF MANAGEMENT

IT leaders offer advice for dealing with challenging tasks such as building stellar staffs and overseeing multiphase projects.

PEOPLE FIRST

Investing in good people, setting high standards and delegating tasks pay off.

BY DAVID GEER

INFORMATION TECHNOLOGY manager Farzad Golshani holds his staff in high esteem, and one way he shows it is not to seem like he's too high on himself.

"Even though I am a vice president, I am a very informal person. I don't act like a typical manager," says Golshani, vice president of IT infrastructure at Transamerica Retirement Services in Los Angeles. "I go to their cubes and say hello on a daily basis. I try to establish trust between me and the people I work with." That trust has returned handsome dividends. "I have about 15 direct reports, and they are very loyal and very committed to what we do here," says Golshani.

One illustration of this is a project that Golshani's team recently completed. A vendor brought in to evaluate feasibility before the start of the project said there was no way it could be implemented in the time allotted. "But we did it on time, within the budget, and the quality of the job was very good. I think everybody, including the vendor, was very surprised," Golshani says.

He cites employee loyalty — the fruit of trust, personal involvement, staff empowerment, delegated tasks, and the responsibility and freedom his people have to do their jobs — as the source of this success.

STEEPING STAFF IN BUSINESS

At Watkins Motor Lines Inc., Dennis E. Michael helps team members understand the business by bringing it to them. "In our quarterly department meetings, we always have an outside presenter, usually from another part of the business, to explain what they do," says Michael, vice president of IT and strategic planning at the Lakeland, Fla., company.

For example, a recent presenter was a vice president who oversees the transportation company's long-distance drivers. "We had worked on six different applications for [the drivers] — things like being able to give differential pay based on a driver's home location, issuing them a fuel card to give them our company discount at selected service stations across the country, and paying them for their orientation as our business partner," says Michael. After the presen-

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Earn loyalty over time by first building trust and allowing for individual responsibility.

Motivate by showing IT workers firsthand how their contributions benefit the business.

Set high standards for the team, but ensure that expectations are reasonable.

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RETENTION: This Time, It's Personal

is a top priority in personnel management. And if keeping them is critical, the effort to secure them should be personal.

According to Diane Morello, an analyst at Gartner Inc., every company needs to create a retention, recruitment and satisfaction toolbox tailored to satisfying the multiple needs of everyone in the organization. "You have to make contact and have a connection – the CIO with his or her direct reports," says Morello.

That connection must be personal, Morello emphasizes. "We've seen that borne out repeatedly. A generic approach to satisfying or taking care of people only goes so far. It satisfies a checklist but doesn't quite satisfy the people," she says.

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PICKING PERSONABLE PEOPLE

Whom you manage can be as important as how you manage. "I try to find candidates who I know are very good communicators, who have had accolades for great customer service," says Cara A. Babachicos, CIO and corporate director at Partners Continuing Care System Inc., the nonacute care services division of Partners HealthCare System Inc. in Boston. According to Babachicos, good hires are people who have established a balance between job tasks and these kinds of skills.

"They need to be smart and technically astute, but it's all in how they present an issue and how people perceive it, and their communication of the matter," says Babachicos. And in the end, she says, it really comes down to whether people like them.

"Never let 'it's hard' be the reason that you don't tackle tough issues," says Matt Lynch, senior vice president and CIO at ShopKo Stores Inc. in Green Bay, Wis. Lynch sets very high standards and helps his people reach them.

He advises building a master plan. "The thing to do with the future is not to forecast it, but to create it. The objective of planning is to envision a desirable future and to invent ways of bringing it about," he says.

Lynch is quick to qualify this with a warning to "be constantly on guard against the pursuit of perfection." He also says, "People respond to challenges that are achievable. They truly flourish when they stop fighting fires and apply their talents to making measurable progress in driving IT and the business to the next level."

Geer is a freelance writer in Ashtabula, Ohio.

COHESIVE COMPLIANCE

IT leaders advise a coordinated and continuous focus on regulatory requirements.

BY JENNIFER McADAMS

TOP TECHNOLOGY officials who toil daily in heavily regulated environments offer these words of encouragement to companies new to the struggles of compliance: What doesn't kill or bankrupt you makes you stronger.

Perennial issues around the Sarbanes-Oxley Act financial disclosure laws, along with new privacy-related regulations and industry self-policing efforts, are seeding shock waves across many sectors. Retailers and other organizations that were once solely focused on narrow mission statements have suddenly become subject to a slew of new reporting and auditing requirements.

Often, the first instinct is to react furiously to avoid penalties and potentially negative press. Giving in to this impulse, however, is a response that could cost corporations plenty, warn this year's IT leaders, some of whom represent industries such as banking and health care, where compliance is a way of life.

Instead of scurrying to slay regulatory requirements one at a time, devise broad compliance strategies that take on several reporting tasks and simultaneously fulfill the obligations that stem from several statutes or regulatory bodies. Along the way, use compliance to shore up operations overall, seasoned executives advise.

"Compliance pressures are now manyfold, and people are failing to realize that they need to look beyond the immediate challenge," notes Michael Rasmussen, an analyst at Forrester Research Inc. in Cambridge, Mass. "Another common mistake is to focus on compliance as a project, instead of an ongoing process."

THE BIG PICTURE

Within the financial services industry, the presence of government and industry regulators is almost palpable. "The issue of compliance in banking has been around forever, so Sarbanes-Oxley has not been a huge shock to our industry the way it has been to others," says Joseph McCartin, senior vice president and CIO at Cleveland-based National City Corp. National City is a financial holding company with a banking network that stretches across several states, including Illinois, Kentucky, Missouri and Michigan.

The long history of dealing with a multitude of regulations, however, has led National City and other financial services firms to build a plethora of systems. But ironically, new statutes are forcing integration. One example is the USA Patriot Act, which requires banks to obtain key information about customers in order to identify potential national security threats. "We have this mishmash of platforms. Now, with 'know your customer' kinds of mandates, we are undergoing a lot of data consolidation," McCartin says.

Based on his experiences, McCartin strongly suggests that others steer clear of one-off compliance solutions. "Try to avoid knee-jerk compliance," he says. "Invest in common data stores, and consciously drive your solutions. Don't just wait for the next set of regulations and build a new system every time to chase the nuances."

Better yet, think beyond even the series of regulations your enterprise may ultimately face, and figure out how compliance can actually strengthen your company, suggests Steven Naylor, vice president and director of IT at Federal Home Loan Bank of Topeka (FHLBank). "Although our goal is to be compliant, we also assure the work is making us a stronger company and that we are not just 'meeting the audit requirement,' " he says.

For enterprises that are new to stringent reporting requirements such as those contained in the Sarbanes-Oxley Act, just building the data management systems that are necessary to meet audits can impose discipline and reinforce operations.

"I think we've matured as an organization in terms of our document processes," notes David Oles, IT director of research and development at Rent-A-Center Inc. in Plano, Texas. "Don't get me wrong — nobody likes these exercises, and it's been a tough year for us because of them. But I do think we are better off than we were before."

A large component of compliance involves the treatment of electronic records vs. paper documents, which is new territory even for heavily regulated industries. It's a challenge that hits enterprises struggling for the first time to absorb new requirements and plan new systems as well as for those corporations retrofitting the platforms already in place to integrate reporting data.

A CLEAN SLATE

But such was not the case for Baptist Health of Northeast Florida in Jacksonville. In February, Baptist Health opened a brand-new

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"There is a certain amount of risk because this is a green-field opportunity," says Garcia. "We had to make sure the electronic records we deployed met regulatory requirements that stipulate what makes up a medical record and what qualifies as retention."

Risk management and legal teams were heavily involved in ensuring that Baptist Health's purely electronic environment complied with major health care statutes such as the Health Insurance Portability and Accountability Act. "This was an effort that involved many task forces," Garcia says.

Along with task forces for ironing out initial compliance policies and practices, IT leaders strongly recommend designating officials and resources to make sure an enterprise stays within the parameters of applicable statutes.

"We have an executive vice president of risk management and an entire organization we partner with to make sure we comply with all of the regulations we face," says McCartin.

In the end, covering your bases and parlaying compliance into a boost for your company is the name of the game.

"We make sure the controls we put in place are designed in a way that makes them meaningful for our company," explains FHLBank's Naylor.

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SECURITY IMPERATIVE

Overcoming information security obstacles requires extraordinary levels of communication. BY JAIKUMAR VIJAYAN

TO KEN BOHLEN, an organization's attitude toward information security is modeled by the expectations that are set at the very top.

That's one of the reasons why Bohlen, who is executive vice president and chief innovation officer at Textron Inc., has created an organizational structure under which the company's top security and privacy officers report directly to him. The model was designed to let Bohlen have a say in enterprisewide security matters. It's also aimed at giving him near total visibility into all facets of information security and data privacy at the $10 billion Fort Worth, Texas-based conglomerate, which owns companies such as Bell Helicopter and Cessna Aircraft Co.

"It's something we had to put in place, particularly because of Sarbanes-Oxley," he says. "It's helping transform the way we look at information security and privacy."

Bohlen's top-down approach to information security is an example of the new strategies that IT leaders say are needed to comply with regulations and deal with emerging security and privacy threats.

"The one point about security that is being widely recognized is that it's an enterprisewide issue and not just a technology issue or an IT issue," says Mark Resmer, formerly chief technology officer at eCollege and now CTO at Whitney University in Dallas.

Increasingly, the key to a successful security strategy is in being able to connect the technology issues to the business issues, says Pete Lindstrom, an analyst at Spire Security LLC in Malvern, Pa.

"You can't ignore the technology issues," Lindstrom says. "But you've got to be able to connect all the bits and bytes and tie that back to the business issues."

NEW KIND OF SECURITY

Several factors are changing age-old notions about the information security function and its place in the organization, say IT leaders.

Traditional network perimeters are fast disappearing, if not already gone, as companies connect their networks to those belonging to partners, suppliers and customers. The trend is exposing companies to greater risks than ever before, even as cyberthreats and the people behind them appear to be getting more sophisticated.

Companies are also under pressure to demonstrate due diligence when it comes to securing their networks and data, whether from statutes such as the Sarbanes-Oxley Act or data privacy regulations such as California's SB 1386 law.

Adding to the challenge of securing enterprise data is the proliferation of mobile and wireless workers and small storage devices, such as thumb drives capable of storing gigabytes of data, says Eric Gorham, director of IT at the Regional Justice Information Service, a data processing center serving law enforcement agencies and other public-sector bodies in the St. Louis area.

As a result, security today needs to be not so much about technology but about "people, processes and of accountability throughout the organization," Resmer says.

User training, awareness and education are as important as technology when it comes to implementing an effective security strategy, he says. Also key is the need to view information security as a business-enabling function rather than as just a cost center that always "prevents people from doing things," says Resmer.

One example is eCollege's approach of allowing employees to use their own PCs and laptops when connecting to the company's network, Resmer says. This is despite the fact that eCollege — like the universities and other academic institutions it serves — operates in an environment that's long been considered especially vulnerable to hacker attacks. "We can try to prevent people from using their personal systems, but then you are only encouraging them to find ways around that," Resmer says. Instead, eCollege allows it, as long as users meet certain prescribed safeguards.

In the end, it's about "making security something that isn't just the CIO's problem," he says. "Make it the CTO's problem, the CFO's problem, the CEO's problem and the board's problem."

And make sure there's involvement at the very top, Bohlen says. As a global organization with offshore operations, Textron's security challenges include protecting its intellectual property and complying with rules that prohibit certain kinds of data from being handled at offshore locations.

Every month, Textron's chief information security and privacy executives brief Bohlen on key events and trends pertaining to enterprisewide information security and data privacy issues. Bohlen also gets feedback from individuals within each business unit who report directly to him.

Quarterly audits by an internal team and an annual audit by an external firm further augment Textron's security efforts and ensure that internal compliance goals are being met.

And there's no such thing as overcommunication when it comes to information security, says Hari Bezwada, program manager for IT systems at the Pentagon Renovation & Construction Program Office in Arlington, Va.

Bezwada, for instance, is in charge of requirements-gathering in a massive ongoing effort to combine networks belonging to the U.S. Army, Navy, Air Force, Marines and the National Military Command Center into a single unified command center. The effort entails getting each of the services and agencies to operate off a common network backbone with standardized servers and storage. It requires the agencies to adopt standardized security and firewall rules that can be managed centrally while also accommodating the unique security requirements of each agency.

Key to making it all work is communication, says Bezwada, whose IT team is working with operational leads from each agency to learn about their specific security requirements and alleviate any fears they may have.

The approach guarantees their support while also ensuring that broader goals are met, he says.

"Communicate, communicate, communicate," says Bezwada. "Communicate up your chain to senior leaders to get their buy-in. Communicate across your community to get information and learn from others who may have gone through, or are going through, a similar experience. And communicate with your users. They're the ones who will make or break your project."

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NEW KIND OF SECURITY

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Traditional network perimeters are fast disappearing, if not already gone, as companies connect their networks to those belonging to partners, suppliers and customers. The trend is exposing companies to greater risks than ever before, even as cyberthreats and the people behind them appear to be getting more sophisticated.

Companies are also under pressure to demonstrate due diligence when it comes to securing their networks and data, whether from statutes such as the Sarbanes-Oxley Act or data privacy regulations such as California's SB 1386 law.

Adding to the challenge of securing enterprise data is the proliferation of mobile and wireless workers and small storage devices, such as thumb drives capable of storing gigabytes of data, says Eric Gorham, director of IT at the Regional Justice Information Service, a data processing center serving law enforcement agencies and other public-sector bodies in the St. Louis area.

As a result, security today needs to be not so much about technology but about "people, processes and of accountability throughout the organization," Resmer says.

User training, awareness and education are as important as technology when it comes to implementing an effective security strategy, he says. Also key is the need to view information security as a business-enabling function rather than as just a cost center that always "prevents people from doing things," says Resmer.

One example is eCollege's approach of allowing employees to use their own PCs and laptops when connecting to the company's network, Resmer says. This is despite the fact that eCollege — like the universities and other academic institutions it serves — operates in an environment that's long been considered especially vulnerable to hacker attacks. "We can try to prevent people from using their personal systems, but then you are only encouraging them to find ways around that," Resmer says. Instead, eCollege allows it, as long as users meet certain prescribed safeguards.

In the end, it's about "making security something that isn't just the CIO's problem," he says. "Make it the CTO's problem, the CFO's problem, the CEO's problem and the board's problem."

And make sure there's involvement at the very top, Bohlen says. As a global organization with offshore operations, Textron's security challenges include protecting its intellectual property and complying with rules that prohibit certain kinds of data from being handled at offshore locations.

Every month, Textron's chief information security and privacy executives brief Bohlen on key events and trends pertaining to enterprisewide information security and data privacy issues. Bohlen also gets feedback from individuals within each business unit who report directly to him.

Quarterly audits by an internal team and an annual audit by an external firm further augment Textron's security efforts and ensure that internal compliance goals are being met.

And there's no such thing as overcommunication when it comes to information security, says Hari Bezwada, program manager for IT systems at the Pentagon Renovation & Construction Program Office in Arlington, Va.

Bezwada, for instance, is in charge of requirements-gathering in a massive ongoing effort to combine networks belonging to the U.S. Army, Navy, Air Force, Marines and the National Military Command Center into a single unified command center. The effort entails getting each of the services and agencies to operate off a common network backbone with standardized servers and storage. It requires the agencies to adopt standardized security and firewall rules that can be managed centrally while also accommodating the unique security requirements of each agency.

Key to making it all work is communication, says Bezwada, whose IT team is working with operational leads from each agency to learn about their specific security requirements and alleviate any fears they may have.

The approach guarantees their support while also ensuring that broader goals are met, he says.

"Communicate, communicate, communicate," says Bezwada. "Communicate up your chain to senior leaders to get their buy-in. Communicate across your community to get information and learn from others who may have gone through, or are going through, a similar experience. And communicate with your users. They're the ones who will make or break your project." ◗

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"We don't tend to waffle back and forth," says of 1-800-Flowers.com.

SPEED OF BUSINESS

IT leaders are pressed to keep balance during rapid expansion.

BY JENNIFER McADAMS

CHANGE IS now the only constant in most corporate IT shops. Not only do today's technology leaders make systems-related decisions that affect thousands of users, but they also must react quickly to market shifts and hustle to appease zealous CEOs bent on getting ahead in fast-paced industries.

High on the stress list are mergers and acquisitions. When organizations blend, some IT staffers work overtime to absorb and accommodate entire organizations, while other technology workers strive to adjust quickly to the foreign ways of new parent companies.

Growth without acquisition is painful as well. Many business development departments now regularly demand new technologies to help move companies forward.

Regardless of the triggering events, there are some basic strategies for successfully enacting and managing changes, according to industry experts. The roster of Premier 100 IT Leaders who are guiding organizations through extraordinary changes includes technology executives at FedEx Kinko's, 1-800-Flowers.com Inc., Rent-A-Center Inc. and the University of Phoenix Online.

Decisiveness — sometimes in the extreme — is crucial, most agree. "There is a lot to be said for the Draconian method," says Ian Campbell, president of Nucleus Research Inc. in Wellesley, Mass. "It's quick, efficient and painful — but only for a short amount of time."

At the same time, IT leaders should remain compassionate in the face of inevitable resistance, especially if they are to make the most of existing talent. To reduce stress, some enterprises turn to outside vendors during times of change. Others assure staffers of payback once things settle down. But particularly shrewd is the leader who realizes when painful changes are taking a toll and stops to let employees catch their breath. "Humans can only take on so much change," says Campbell.

GROWING PAINS

While most people can tolerate only limited amounts of change, many organizations now seem to have insatiable appetites for transformation. Staffs are just expected to adapt instantaneously.

Most common is the top-down approach. Consider 1-800-Flowers.com, which has snapped up several large brands — including home and garden retailer Plow & Hearth Inc. and The Popcorn Factory Inc. — all of which now share core administrative units.

"We didn't overengineer the effort. We don't tend to waffle back and forth," says Enzo Micali, senior vice president and CIO at 1-800-Flowers.com in Westbury, N.Y.

"In past jobs, I've been involved in best-of-breed selections. And frankly, those are very complicated," he adds.

Expectations are especially high in the wake of acquisitions. "Senior executives will come to the IT group and say, 'We want it yesterday,'" says David Oles, IT director of research and development at Rent-A-Center (RAC) in Plano, Texas.

Growth by acquisition is a way of life for RAC, which sells home furnishings and consumer goods via rent-to-own agreements. Hence, Oles and his staff have learned to change direction on a dime. "In one case, we converted [systems for] 27 stores over a two-to-three-day period," recalls Oles.

To move this fast, RAC has learned to lean heavily on its business partners. For instance, when the corporation plunged recently into the personal financial services industry by acquiring several check-cashing and payday loan centers, RAC moved in lockstep with two point-of-sale software vendors. "Our partners have the checklists ready, and they go in to configure hardware and install the software quickly," notes Oles.

HOLD HANDS

Imposing core systems and operations across an organization may prove less complicated, but it can also be downright painful for employees.

"Forget the technology piece of it. You first have to deal with the fact that you now have this group of five to 10 people who once had the ability to act fairly autonomously and now have a new corporate entity and new processes to follow. There can be a lot of separation anxiety," Micali says.

Anxiety of a different sort plagues those staffs in enterprises undergoing explosive internal growth, says Kathy Claypatch, director of online IT operations at University of Phoenix Online. Claypatch spearheaded the creation and delivery of an online education infrastructure in just 30 days.

"We've recognized that our business is growing so fast that we have to be flexible in areas such as scheduling. We have to be empathetic to the fact that we are often disrupting the family lives of our employees, so we need to be ready to do something for those employees in return," she says. That could mean, for example, offering additional days off for staff members with sick children, says Claypatch.

To soften the blow, IT leaders should explain upfront exactly what major corporate changes will mean on an individual level. "It is so much easier if you have senior executives telling the stakeholders exactly what is going to happen," says Oles.

Along with frankness, organization is critical. When FedEx executed its $2.4 billion acquisition of Kinko's Inc., managers held weekly "dashboard" meetings on major IT projects, says Laurie Zeitlin, senior vice president and CIO at FedEx Kinko's in Dallas. "We stayed focused and incorporated project management," she says. "You don't want to assign a PMO to everything, but you have to have a balance."

When all is said and done, balance, timing and acceptance tend to define the resilient corporation. "The bar gets raised every year," says Zeitlin. "If you just develop that as your mind-set, you simply move forward."

McAdams is a freelance writer in Vienna, Va. Contact her at jjwriterva@aol.com.

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"It's really not about technology," says Austin Energy CIO

MANAGING MEGA-PROJECTS

It's all about the business, communication and the 'big sell' to executives, employees and partners. BY STACY COLLETT

CIO ANDRES CARVALLO presented a grim prognosis for Austin Energy's IT systems to company executives during a meeting in January 2003. The 10th-largest public power utility in the nation had spent several years building IT silos without a CIO at the helm. The company was rife with inefficiencies. There were too many manual processes, the utility was paying twice with redundant systems, companywide IT standards were nonexistent, and executives didn't have real-time data for making decisions.

Yet Carvallo says he emerged from the three-hour meeting with full buy-in for a $50 million transformation of the $1 billion company's IT resources, systems, processes and standards, and a four-year plan to do "whatever I want" to tackle widespread inefficiencies. Now three years into the project, Carvallo's team is meeting its goals.

How'd he do that? It was no magic trick. Many of this year's Premier 100 honorees know the secrets to tackling megaprojects — those multiphase IT transformations that affect an entire company, encompassing multiple systems over several years.

Most agree that success starts with understanding the business and making IT the enabler for project success, and then bringing clarity and passion to all stakeholders.

BUILD TO SUIT

Carvallo believes that in a megaproject, it's change management that requires the most attention from start to finish. Understand employees' and partners' capabilities and limitations, and build new systems accordingly, he says.

"It's really not about technology. IT can always build the most colossal Ferrari for any solution, but that's not always what's needed. Sometimes what's needed is a Volkswagen or a bicycle," says Carvallo, who spent a month interviewing hundreds of IT employees before coming up with the project plan.

When Austin Energy moved to a wireless system for repair work orders, Carvallo had to consider that workers were accustomed to paper order forms. The new plan called for laptops in every repair truck that would tell workers where to go and what to do. "Do they have the computer skills for that? Can they get trained on rebooting systems or closing an order so that it can go back into the billing system? All these variables have to be considered as you're bringing in automation," he explains.

The utility holds ongoing training for all employees, including certification on most enterprise applications, to guarantee that power users truly know how to use the products. "We do focus groups with every customer segment that we interact with on a [business-to-consumer] basis, and we train our external customers on how to use our portals," Carvallo adds.

When assembling a team to lead multiple projects in an IT transformation, "you have to overwhelm this task with resources and capabilities," says Michael Patterson, a partner at Patterson Pruden LLC, a New York-based consulting firm.

If a project requires five highly skilled team members, at least three of them should have been successful at leading megaprojects in the past, Patterson advises. "If I don't have three, I need to go recruit one" from a business unit, an outside consulting firm or a headhunter, he adds.

PLEASE Don't Call Them Megaprojects!

at The Boeing Co., balks at the term *megaproject*. "We don't do, don't want and don't intend to do megaprojects," Griffin says. "My experience is the bigger the project, the less chance it has to succeed." That's a daunting reality, considering that Boeing is undergoing a major transition to simplify business processes, including a plan to go from 3,100 systems to 500 common systems built around six lean business models.

Griffin's rule of thumb: If it can't be done in nine months, the project is too big. Instead, he strings together a series of IT projects with clear deliverables. What's more, "you usually hurt people by pulling them out of their jobs for more than a year and sticking them on a megaproject because they lose the blessing of the customers they're supporting," he explains.

- STACY COLLETT

EMBRACE BREAKDOWNS

Megaprojects won't succeed unless the IT staff embraces the breakdowns, says Tom Scott, executive vice president of operations and CIO at Direct Holdings Worldwide LLC in Virginia Beach, Va. "To believe there shouldn't be breakdowns [during a project] is like believing that Donald Trump will change his hairstyle," he says.

Scott just completed an overhaul of all IT applications for Direct Holdings' catalog retailer, Lillian Vernon, including those supporting order entry, customer service, warehouse management, financials, decision support and a new Web site. Each application was replaced with one or more best-of-breed applications.

IT staffs have to adopt a "glass half full" attitude, he says.

"[Breakdowns] will either be your sinkhole or your proverbial thousand points of light. They're like the gold in the project to identify where course corrections should be made," Scott says. "Once people on project teams get focused on how to avoid looking bad, they begin to self-destruct. They start doing crazy things like 'How do we blame the vendor?' or 'How do we cover up issues to avoid losing our jobs?' "

The best way to avoid the spiral is to invent new ways to declare success, Scott says. "If you missed a big day, you have to reinvent what success now means. If you have a budget overrun, go back and look at ROI," he says. You're still gaining this much and saving this much to get this system in." ▸

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Foreign CHALLENGE

Forget what you've learned. The new global landscape creates a brand-new set of IT tasks. BY MARY BRANDEL

TODAY'S IT LEADERS are finding it increasingly difficult to bury their heads in U.S. soil. Even domestic companies are finding offshore partners or are testing the waters of emerging overseas markets — or they soon will. And multinationals that already span the globe are increasingly reining in decentralized IT operations and striving to create a portfolio of global IT standards and applications that also accommodate local variances.

So check the pockets of many of this year's Premier 100 IT Leaders, and you'll likely find an updated passport: Nearly half of them report that they're managing global operations that span time zones, continents and cultures.

"Even if you're not responsible for facilities and operations in other parts of the world, you still need a global perspective because so many processes that enable the business are often outside the U.S.," says Shawn Banerji, executive director of Russell Reynolds Associates Inc., a New York-based executive search firm that helps companies locate global IT talent.

And heading global projects, Premier 100 IT Leaders have found, means facing challenges that are very different from those at home. Just ask Fred Danback, vice president of global technology at Stamford, Conn.-based XL Global Services Inc., which provides IT services to XL Capital Ltd., a large Bermuda-based financial services company. Through a flurry of acquisitions, the company now operates in 29 countries.

A PROJECT OF EPIC PROPORTIONS

In 2001, XL Global began creating a shared services infrastructure for XL Capital's distributed IT functions. But building a cross-continental infrastructure is a huge endeavor, given the variety of legal systems, business rules, social cultures and economic climates involved. Moreover, because XL Capital had grown through acquisition, the individual units were still aligned with their own business models. With 17 different IT organizations, "it was a very politically sensitive environment," Danback says.

Those sensitivities came to the fore when Danback's group began creating a portfolio of applications and technology standards. From the outset, it found just a small number of de facto standards, such as Microsoft Office, that were already in use by most of XL Capital's businesses.

To develop further standards, the group gathered senior IT representatives from around the world to collect input. But as the representatives returned home to impose the agreed-upon standards, it soon became clear that a decision made by consensus didn't always fly if the messenger didn't buy into it himself.

"Say we decided on Microsoft Exchange for a global e-mail standard. Well, the people who had argued for Notes would go back to their bosses and say, 'Here's what happened,' and it would work its way through to the business leaders with a negative spin, until we were told, 'You're absolutely not changing our e-mail system,'" Danback explains.

Lesson learned: No IT buy-in, no business buy-in. So for the next standards-setting meeting, Danback's group invited representatives at the CIO level. "If you have a strong, powerful CIO who didn't like what we were doing, he had much more influence over the local business than we did," Danback says. "It was clear that while many decisions were technical, they required executive-level participation."

CULTURE CLASHES

It's important to realize that all these negotiations happen among people from different cultures whose rules you need to understand to be effective,

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Continued from page 42

Danback says. For instance, the culture in the Asia-Pacific region discourages people from showing dissent even if they disagree. "You need to be assured you've got real buy-in and that it's not superficial," Danback says.

Cultural issues also arose when Danback's group implemented XL Capital's global e-mail system. This entailed establishing a universal identity management system, which meant replacing seven naming standards that were based on local cultural conventions. For instance, in places such as South America, a person might use five names — his first and middle names, plus a parent's middle and last names.

The answer was to create a user identification number — which turned out to be unpopular with certain segments of users. "It was considered impersonal in Latin America and certain parts of Europe, where people like to have a personal identity when they log onto their systems," Danback says.

IT tweaked the system so that once a connection is established, an employee is greeted with a more personal screen name. With this change, which has also enabled simplified sign-on and identity management, the system garnered an 86% approval rating in an intranet poll that Danback's group conducted.

So far, in addition to the e-mail system, a single-carrier global network, and global partnership agreements with Microsoft Corp. and Hewlett-Packard Co., Danback's group has also established a portfolio of 50 global technology standards, as well as a technology architecture reference guide that's used by all of XL Capital's IT groups.

'NOT IN THIS COUNTRY!'

Global negotiations are also a big part of the job for Jay Crotts, CIO in the lubricants and business-to-business segments of Royal Dutch Shell PLC, which has operations in North America, Latin America, Europe, Asia and Africa. Like Danback, Crotts has been helping his company create a global portfolio of IT applications as part of a three-year effort to standardize Shell's business processes around the world. The goal is to pare down some 500 applications to a standard set of 50.

Obviously, the applications have to accommodate local business laws and practices. But because they will be centrally hosted in multiple data centers around the world rather than on individual countries' servers, it's imperative that the company develop a change-control process that determines which customizations are really needed. Once vetted, those changes get incorporated into the base application.

"You've got to take the local tweaking out, or you don't have a consistent application anymore," Crotts says.

But people find it hard to distinguish between the business norms that must be accommodated for fiscal or legal reasons and the tweaks they merely want to be included because that's how they're used to operating, he says.

"They'll throw up many reasons why [an application] won't meet their business requirements, but after engaging them in a discussion about it, you find you can resolve the problems with some small modifications," Crotts says.

To successfully negotiate these issues, he says, you really need to dig into understanding the nuances of international laws, such as how taxes get calculated or — on an even more granular level — which countries accept only cash payments or allow only legal business owners to make payments for delivered goods.

Those who wish to lead a global IT organization are best off gaining international experience ahead of time, says George Coulter, CIO at The AES Corp., an Arlington, Va.-based company that generates and distributes electric power to 27 countries on five continents.

As the company's first CIO, Coulter is helping AES transform itself from a decentralized company with very few sophisticated IT systems in place to a company with hybrid centralized/decentralized operations supported by a common IT platform across two data centers running common business processes.

One of Coulter's challenges has been to find CIOs to handle localization issues in all 130 of AES's businesses — not an easy task in places such as Ukraine, Kazakhstan and Cameroon. It requires a global search, often for expatriates who want to return to their native countries.

Another challenge has been to create two collocated, outsourced global data centers in Virginia and London, into which each country's systems connect via a WAN or a virtual private network, replacing 10 large data centers and 120 smaller ones. All systems operating in the businesses use common components and a common infrastructure, based on HP blade servers running SAP ERP applications on Linux. The dual-data-center model enables load balancing using F5 Networks Inc.'s Big-IP and disaster recovery via Oracle Corp.'s DataGuard in combination with Real Application Clusters. "We consider it to be one data center in two locations," Coulter says. Application development is all done in India.

All countries will share common SAP templates, allowing for individual businesses to make tweaks for local variances, particularly to meet country-specific regulations. "In some of our businesses, like in Brazil, the regulator gives you a 48-hour deadline to make changes, so there's high volatility, and the local businesses need to respond quickly," Coulter says.

While the infrastructure is now complete, and the billing and customer-care modules are coming online, there have been plenty of localization issues to tackle. For instance, SAP doesn't support the Ukrainian language, so Russian was substituted.

ATTITUDE IS KEY

Coulter attributes AES's success to its "steady as you go" approach. But he doesn't think he could have played a role in these achievements without his global moorings from previous jobs at Racal Electronics PLC, PepsiCo Inc., Citibank and other companies. "If you haven't played in the international arena, you'd be absolutely lost on the IT side," he says.

In addition to dealing with various cultural issues, "technically there are a lot of things we take for granted domestically," Coulter says. "We've had to push the envelope, particularly on the network side, to get things done."

That's why it's important for companies to develop programs to prepare their IT leaders for an increasingly global world, says Jory Marino, managing partner at Heidrick & Struggles International Inc., an executive search firm in New York.

"Companies that want to develop global CIOs will give leaders global experience, either through moving someone abroad or simply challenging them to work on global teams," Marino says. "It's not something that's innate, and corporations with a strong viewpoint on leadership development will develop experiences to offer individuals willing to rise to the occasion."

Brandel is a Computerworld contributing writer. Contact her at marybrandel@verizon.net.

Global Negotiations

AT ROYAL DUTCH SHELL, negotiating is central in selecting which applications will land in the company's standard portfolio. To do this, IT launches an investigation into where best practices are already being delivered in a particular region and then leverages that application for consistent delivery around the world.

The most successful project to date, says Jay Crotts, CIO in the lubricants and business-to-business segments, is the implementation of a CRM tool, which was based on an application being used in Malaysia. So far, it has been implemented in 16 out of the 100 countries Shell operates in, with full rollout targeted for 2010. Despite being a somewhat low-tech tool, "it literally receives applause by the sales force community," Crotts says.

Despite the CRM tool's success, it's not easy for users to accept the idea that their own application might not be selected for the global portfolio.

"There's a lot of natural resistance," Crotts says. The best way to defuse the emotional turmoil, he says, is to be as quantitative in your methodology as you can be.

For instance, at Shell, the team that chooses the applications is made up of IT representatives from various countries and regions. The group uses key performance indicators as well as other qualitative measures to score the application candidates and then meets to debate which will become the global standard. When there is dissent, a rule kicks in: No one is allowed to recommend his own country's application. This forces the team to analyze which one would be second best. It also makes for a less heated discussion, Crotts says. "When your esteemed colleagues don't pick your application, it becomes clear that it's not the best choice," he says.

– MARY BRANDEL

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Managing UP

The first step toward building a relationship with your CEO is to establish mutual trust. **BY THOMAS HOFFMAN**

SINCE BECOMING CIO at Rockford, Ill.-based Rockford Health System in November 1994, Dennis L'Heureux has reported to two CEOs and an interim chief executive. He has also worked with four chief financial officers and three human resources directors during his tenure, so, he says, "I've had to rebuild a lot of relationships over time."

Even though L'Heureux has managed to survive each change at the top, that hasn't lessened his anxiety about job security each time new leadership comes aboard. "There's the uncertainty of not knowing whether the new guy will sweep away everyone who is here and bring in his own people," he says.

But L'Heureux has survived, in large part by listening well, demonstrating a willingness to compromise and dealing carefully with organizational politics.

"Because Gary [Kaatz, CEO of Rockford Health System since 2000] didn't hire me directly like he did with his CFO, he didn't know what my loyalties were and what my abilities were," says L'Heureux. Kaatz also didn't know what L'Heureux's track record was in areas such as delivering projects on time and achieving return on IT investments. So aside from the biweekly meetings they have together, L'Heureux has met with Kaatz periodically to discuss the rationale that existed for certain IT project and spending criteria prior to his arrival as CEO.

It's this kind of trust-building that has helped IT leaders such as L'Heureux develop and maintain strong relationships with senior business executives they either report to or otherwise work closely with to formulate company strategies. "The IT leaders that are successful at managing up are translating key business metrics in understandable terms," says Howard Rubin, a senior adviser at Stamford, Conn.-based Gartner Inc. "What they're really doing is a lot of outward-bound proactive communications."

LENDING AN EAR

Many Premier 100 honorees say that the most effective way to develop and maintain strong connections with senior executives is to listen carefully to what they have to say and try to place yourself in their shoes. "It's important to speak to [business executives] in a language and with concepts that they understand," says John Glaser, vice president and CIO at Partners HealthCare System Inc. in Boston.

"I have a teenage daughter, and often our views of the world don't connect at all," says Glaser, explaining that he bridges the divide with senior business executives at Partners HealthCare just as he does with his daughter — by speaking in terms they're familiar with.

Says Glaser, "You have to be on the same intellectual plane."

Glaser has been the CIO at Partners HealthCare for 10 years and has always reported to the chief operating officer. His discussions with senior executives at Partners HealthCare vary by topic. Budget discussions are held with the CFO, and meetings about strategic initiatives are typically held with the CEO, says Glaser. So what does he talk to the COO about?

"Major complex political issues that have to be resolved," says Glaser. These could include updates on the status of doctor/patient Internet-based communications capabilities that Partners HealthCare provides.

Glaser says he gets along well with the COO, adding that the relationship hasn't changed much in the past several years. "Over the first couple of years, a relationship is going to mature about roles and responsibilities. That stuff is going to sort itself out, much like it does with a spouse," says Glaser. "The core of the relationship is formed early, so from years three to 10, not a lot of evolution takes place."

Like Glaser, Katherine Busser applies listening skills she developed as a parent to the way she deals with senior executives. "I listen closely to what my children are saying and not saying," says Busser, divisional CIO for the U.S. card division at Capital One Financial Corp. in McLean, Va. She tries to apply the same listening skills to senior management to understand the kinds of challenges that they're trying to tackle.

Right now, that includes helping Capital One's U.S. card business grow and remain profitable. "[The IT] organization isn't bound to offering tech solutions," says Busser. For instance, one week in September, she spent time answering calls from customers "to make sure I understood their relationships with Capital One and how we can help them."

Busser believes that such rotational assignments throughout Capital One's business and operations areas have helped strengthen her understanding of the company's businesses and her relationships with senior management. "The ability to move around and take on new roles is one of the things that makes a strong organization," she says.

Over There

FROM NEW YORK to New Delhi, people might not be much different. But approaches to relationships certainly can be.

Like IT leaders in the U.S., Rajesh Narang, CIO at the Centre for Railway Information System in New Delhi, pays close attention to the projects that his CEO has sponsored and new technologies that he has expressed an interest in, such as RFID.

But in other respects, his relationship with the railway's CEO appears to be more obsequious than the usual CIO/CEO connection in the U.S. For instance, one of his recommendations to other CIOs is to plan on working late most nights if the CEO happens to put in long hours, "since your boss may need clarification or assistance from you."

Narang also warns CIOs never to argue with superiors.

"I'm a man of opinion," says Narang. "I can't choose my CEO or general manager, so I don't normally argue with them."

– THOMAS HOFFMAN

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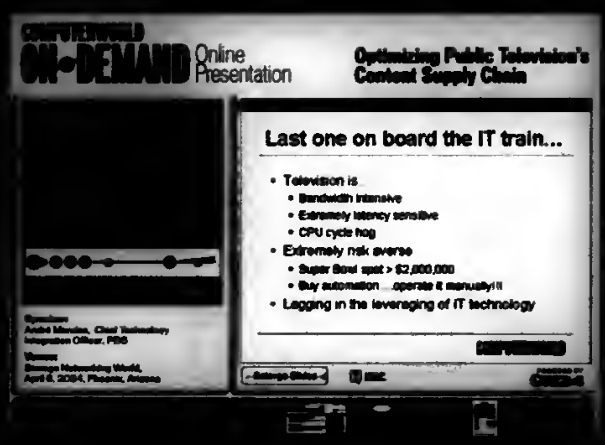
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Executive Editor, Events and National Correspondent, Computerworld

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Supercharging Infrastructure to Create New Products and Services

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Tools and tactics for bullet-proofing data and digital communications; lessons in readiness and recovery learned on the front lines of Hurricanes Katrina and Rita

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Conference Agenda *(subject to change)*

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SUNDAY, MARCH 5, 2006

Registration Open 10:00am – 7:30pm

10:45am – 11:30am **Golf Exhibition with Long-Drive Champion Dan Boever**

Noon – 5:00pm **Pre-conference Golf Outing** *Sponsored by* FUJITSU

7:00pm – 9:00pm **Pre-conference Welcome Reception** *Sponsored by* AVAYA

MONDAY, MARCH 6, 2006

Registration Open 7:00am – 6:30pm

7:00am – 8:00am **Breakfast**

8:00am – 8:15am **Welcome and Opening Remarks**

Julia King, Executive Editor, Events and National Correspondent, Computerworld

Don Tennant, Vice President, Editor in Chief, Computerworld

Patrick McGovern, Chairman, International Data Group and Founding Publisher, Computerworld

8:15am – 9:05am **Opening Visionary Address**

Randy Mott, Executive Vice President and CIO, Hewlett-Packard Company, former CIO, Dell, former CIO, Wal-Mart Stores

9:05am – 9:45am **Panel Discussion: Executing the Global Agenda**

Moderator: **Don Tennant**, Vice President, Editor in Chief, Computerworld

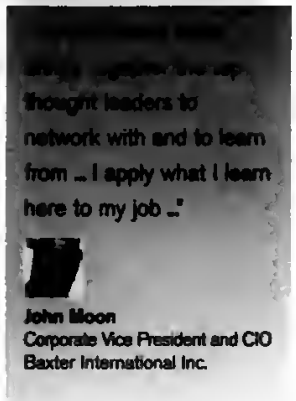
Panelists: **Steve Silverman**, Vice President, Information Technology for Global Operations, Bausch & Lomb, Inc.
Larry Buettner, CIO/Vice President, Wheels, Inc.
Don Gibson, Director, IT, FedEx Services

Across virtually all industries IT is being challenged to duplicate domestic success on a global basis, as business operations expand worldwide. Adopting technology standards and common business processes are key. Overcoming cultural barriers and language differences is also essential. Computerworld's Editor in Chief leads a panel of IT executives discussing best technologies and best practices for going global.

9:45am – 10:00am **Networking Break**

10:00am – 10:30am **Featured Presentation**

continued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here to my job ..."
John Moon
Corporate Vice President and CIO
Baxter International Inc.

Conference Agenda

MONDAY, MARCH 6, 2006 *(continued)*

10:40am – 11:10am	**Concurrent IT End-User Case Studies**
11:20am – 11:50am	**Concurrent IT End-User Case Studies**
Noon – 12:30pm	**Concurrent IT End-User Case Studies**
12:30pm – 2:00pm	**Networking Lunch**
2:00pm – 2:45pm	**Featured Presentation** **Dianah Neff**, CIO, City of Philadelphia
2:45pm – 3:15pm	**Featured Presentation** **Thomas A. Lesica**, Senior Vice President, Global Technology and Operations, Avaya
3:15pm – 3:45pm	**Featured Presentation** **Michael Theis**, Chief, Cyber Counterintelligence, National Reconnaissance Office
3:45pm – 4:00pm	**Networking Break**
4:00pm – 4:45pm	**Panel Discussion: Back from the Brink – Lessons Learned on the Front Lines of Disaster** Moderator: **Julia King**, Executive Editor, Events and National Correspondent, Computerworld Panelists: **Tony Fuller**, Vice President/CIO, Rent-A-Center, Inc. **Rick Omartian**, IT Chief Financial Officer and Chief of Staff, The Guardian Life Insurance Company of America **Gregg Meffert**, Chief Technology Officer/CIO, City of New Orleans **Jan Rideout**, Chief Information Officer, Northrop Grumman Ship Systems **Rizwan Ahmed**, CIO, Office of Group Benefits & Department of Natural Resources, State of Louisiana Recently, Hurricane Katrina devastated the Gulf Coast. Less than a month later, Hurricane Rita hit, then Hurricane Wilma. Flood waters ravaged data centers, employees went missing, entire communities were evacuated. Panelists offer a candid view of where and how their IT and business continuity plans worked, what they didn't see coming and how they plan to prepare and respond the next time disaster strikes.

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Conference Agenda

MONDAY, MARCH 6, 2006 *(continued)*

4:45pm – 5:25pm **Closing Visionary Address**

Richard Clarke, Former adviser on security to four presidents, former National Security Council cyberterrorism chief, author of the books *Against All Enemies: Inside America's War on Terror* and *The Scorpion's Gate*

5:30pm – 8:00pm **Dinner in the Networking Lounge**

TUESDAY, MARCH 7, 2006

Registration Open 7:30am – 5:00pm

7:00am – 8:00am **Breakfast in the Networking Lounge**

7:00am – 8:00am **Special Breakfast Presentation**

Paul Glen, Author of *Leading Geeks: How To Manage and Lead the People Who Deliver Technology*

8:10am – 8:15am **Opening Remarks**

Julia King, Executive Editor, Events and National Correspondent, Computerworld

8:15am – 9:00am **Opening Visionary Address**

Scott Griffin, Vice President and CIO, Boeing Information Technology

9:00am – 9:45am **Panel Discussion: Delivering Business Agility Through IT**

Moderator: **Heather Havenstein**, Senior Reporter, Computerworld

Panelists: **Farzad Golshani**, VP of IT Infrastructure, Transamerica Retirement Services
Mitchell Hansen, VP, Enterprise Systems & Services, Quest Diagnostics Incorporated
Katherine Busser, CIO, US Card Division, Capital One
John Fisher, Senior Vice President & CIO, SmithBucklin Corp.

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9:45am – 10:00am **Networking Break**

continued

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Barbara J. Kunkel
CIO and IT Director
Nixon Peabody LLC

Conference Agenda

TUESDAY, MARCH 7, 2006 *(continued)*

10:00am – 10:30am **Featured Presentation**

Al-Noor Ramji, CIO, BT Group plc

10:40am – 11:10am **Concurrent IT End-User Case Studies**

11:20am – 11:50am **Concurrent IT End-User Case Studies**

Noon – 12:30pm **Concurrent IT End-User Case Studies**

12:30pm – 2:00pm **Lunch in the Networking Lounge**

2:00pm – 2:45pm **Moving Towards the Agile Enterprise**

Mike Hugos, CIO, Network Services Corp.

It's no longer about the technology; it's about how well you use it. It's no longer about squeezing more efficiency from internal operations; it's about how well you respond to external opportunities. Based on real-world experience, Mr. Hugos shows how to achieve agility, using examples from his own career.

2:45pm – 3:30pm **Panel Discussion: The Leadership Agenda – Grooming Next-Generation IT Talent**

Moderator: **Thornton Mey**, Futurist and Computerworld Columnist

Panelists: **Rebecca Blalock**, Senior Vice President and CIO, Southern Company

Wendell Fox, Senior Vice President, North American Information Resources Field Services, Marriott International, Inc.

Bill Regehr, Senior Vice President of Information Technology, Boys & Girls Clubs of America

Jerry Bartlett, CIO, Ameritrade

Next-generation IT leaders must be totally in sync with the need to bolster the top line by creating IT-enabled products and services. They must understand that the customer – and information about the customer – is an organization's most important asset. They must be knowledgeable about the criticality of correctly timing technology entrances and exits. They must understand global competition. This panel of Premier100 honorees discusses how and why they have made grooming next-generation IT leaders a top priority on their own leadership agenda.

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TUESDAY, MARCH 7, 2006 *(continued)*

3:30pm – 3:45pm	**Networking Break**
3:45pm – 4:30pm	**Featured Presentation**
4:30pm – 5:20pm	**Closing Visionary Address**
5:20pm – 5:30pm	**Closing Remarks** **Julia King**, Executive Editor, Events and National Correspondent, Computerworld
7:00pm – 7:30pm	**Cocktail Reception**
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- ❑ Aerospace
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- ❑ Finance/Banking/Accounting
- ❑ Insurance/Real Estate/Legal Services
- ❑ Government: Federal (including Military)
- ❑ Government: State or Local
- ❑ Health/Medical/Dental Services
- ❑ Retailer/Wholesaler/Distributor (non-computer related)
- ❑ Transportation/Utilities
- ❑ Communication Carriers (ISP, Telecomm, Data Comm, TV/Cable)
- ❑ Construction/Architecture/Engineering
- ❑ Data Processing Services
- ❑ Education
- ❑ Agriculture/Forestry/Fisheries
- ❑ Mining/Oil/Gas
- ❑ Travel/Hospitality/Recreation/Entertainment
- ❑ Publishing/Broadcast/Advertising/Public Relations/Marketing
- ❑ Research/Development Lab
- ❑ Business Services/Consultant (non-computer related)
- ❑ Mfg. of Computers, Communications, Peripheral Equipment or Software

Your job title/function:

IT MANAGEMENT
- ❑ CIO, CTO, CSO
- ❑ Executive VP, Sr. VP
- ❑ Vice President
- ❑ Director
- ❑ Manager/Other IT Manager
- ❑ Supervisor

BUSINESS MANAGEMENT
- ❑ CEO, COO, Chairman, President
- ❑ CFO, Controller, Treasurer
- ❑ Executive VP, Sr. VP, VP, General Manager
- ❑ Director, Manager
- ❑ Other Corporate/Business Manager

Number of employees in your entire organization (ALL locations):
- ❑ 20,000 or more
- ❑ 10,000 - 19,999
- ❑ 5,000 - 9,999
- ❑ 1,000 - 4,999
- ❑ 500 - 999
- ❑ 100 - 499
- ❑ 50 - 99
- ❑ Less than 50

What is your organization's annual IT/IS budget for all IT/IS products?:
- ❑ $1 billion or more
- ❑ $500 to $999.9 million
- ❑ $100 to $499.9 million
- ❑ $50 to $99.9 million
- ❑ $10 to $49.9 million
- ❑ $1 to $9.9 million
- ❑ $500,000 to $999,999
- ❑ $250,000 to $499,999
- ❑ $100,000 to $249,999
- ❑ Under $100,000
- ❑ None

What is the estimated annual revenue of your entire organization?:
- ❑ $10 Billion+
- ❑ $1 Billion - $9.9 Billion
- ❑ $500 Million - $999 Million
- ❑ $100 Million - $499 Million
- ❑ Less than $100 Million

The one item that best describes your involvement in the IT purchase process:
- ❑ Authorize/approve purchase
- ❑ Evaluate/recommend products, brands, vendors
- ❑ Specify features/technical requirements
- ❑ Set budget for expenditures
- ❑ Determine need to purchase
- ❑ Create IT strategy
- ❑ All of the above
- ❑ None of the above

What is your organization's MOST mission critical development/implementation project this year?
- ❑ Business Intelligence/BPM/Customer Analytics
- ❑ Data Management
- ❑ Mobile & Wireless
- ❑ Enterprise Infrastructure/Data Center Buildout/Consolidation
- ❑ Network Infrastructure/Storage
- ❑ Security
- ❑ Application Development and Integration (Web services/EAI)
- ❑ Compliance

What is your organization's SECOND-MOST mission critical development/implementation project this year?
- ❑ Business Intelligence/BPM/Customer Analytics
- ❑ Data Management
- ❑ Mobile & Wireless
- ❑ Enterprise Infrastructure/Data Center Buildout/Consolidation
- ❑ Network Infrastructure/Storage
- ❑ Security
- ❑ Application Development and Integration (Web services/EAI)
- ❑ Compliance

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COMPUTERWORLD

SUCCEEDING AT Sourcing

IT leaders advise going outside for high-volume, repeatable processes. **BY JOANIE WEXLER**

HOW DO YOU STRIKE a successful balance of in-house and outsourced IT expertise?

Take some advice from the Premier 100 IT Leaders. These days, top IT executives tend to keep strategic IT architecture decisions close to home. But when a large volume of work provides enough savings to warrant it, they hire outside resources to execute on those decisions.

Topping outsourcing priority lists, for example, are software coding and data center operations. IT executives reason that when such tasks are a core competency of another company, it makes sense to take advantage of its expertise and economies of scale.

Yet IT executives quickly note that outsourcing never means washing their hands of accountability for out-of-house work. Rather, it entails striking close partnerships that are carefully nurtured and managed.

"The horror stories you hear about outsourcing are when you hand over [responsibility] and forget to leave somebody smart behind to manage the deal," says Jeffrey McIntyre, assistant vice president of technology services at BNSF Railway Co. in Fort Worth, Texas.

BNSF outsources its data center and IT operations, including help desk and desktop support, to IBM Global Services. It takes advantage of IBM's volume discounts on equipment and gets its software refreshed every three years as part of the package.

A team in the BNSF IT department focuses on managing the IBM relationship, which includes monitoring resource consumption, managing costs and verifying that service-level agreements are met. The oversight team at BNSF is led by a director, who oversees managers assigned to separate technologies. The managers are each assisted by one or two senior technical staffers.

"This level of oversight prevents 'value leakage' from our relationship with IBM," says McIntyre.

Chicago-based eCollege, a provider of technology products and services to the higher-education community, keeps even tighter management control. It views its offshore software development relationship with Virtusa Corp. in Sri Lanka as an extension of its own staff — minus the payroll, hiring and firing duties.

"I [told] my in-house developers that they have a bunch of [offshore] colleagues to help them create more than what they could do alone," says Mark Resmer, former corporate chief technology officer at eCollege, who located two management employees at the Sri Lanka site. (Resmer recently left eCollege to become CTO at Whitney University in Dallas.)

"We [retained] continuous oversight, beginning to end, in design, development, QA and deployment," Resmer says. Virtually doubling the size of the development organization at what he describes as "a very modest incremental cost" enabled the company to release many new revenue-generating products that would otherwise still be in development, he says.

BEATING THE ODDS

Deloitte Consulting LLP earlier this year conducted a study of 25 global companies with average annual revenues of $50 billion and an average of 60,000 employees and found that the general outsourcing failure rate was more than 70%.

Peter Lowes, a Deloitte partner and leader of the company's outsourcing advisory practice, says failures usually occur when a company doesn't take advantage of repeatable processes that scale across multiple customers.

Failures are most common when companies strike a single complex deal with one large provider that is customized for that company, he says. "It's smarter to break down complex projects into deals with multiple providers who focus on the one thing they do really well," Lowes says.

Lowes describes the new competency in IT organizations as "managing a portfolio of suppliers in an integrated fashion." He adds that he usually sees a progression of successfully outsourced functions. They tend to begin with legacy application support activities and often move from there to porting applications from one computing system to another, then to standardized feature updates. The last step is handing off market-facing requirements, Lowes says.

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IF MANAGED CREATIVELY, outsourcing agreements can result in savings above and beyond reduced head count.

For example, Jeffrey McIntyre, assistant vice president of technology services at BNSF, contracted with IBM to feed the railroad granular operational cost information that would allow it to have an internal chargeback system. BNSF didn't implement one but instead uses it as a "showback" system. Now that BNSF developers can see exactly what the IT infrastructure is costing the company, they "have gotten competitive and looked to make applications more efficient by tuning them and saving the company money," McIntyre says.

At Network Services, CIO Michael H. Hugos requires developers to work on a fixed-bid basis. "This separates the wheat from the chaff," he says. "If they're not willing to do it, they either don't understand [the project], which we can discuss, or they're incompetent."

He says the IT industry can learn a lot by examining the practices of the construction industry, which works on a fixed-bid basis and executes change orders as projects evolve.

Hugos says he looks to strike long-term relationships with outsourcing partners in which both partners have made an investment. He advises that "you make sure your outsourcing partner is making money. I've noticed that when people aren't making money, they don't have a lot of incentive to be responsive."

How do on-site IT staffs gain the management expertise needed to manage outsourcing relationships?

Deloitte Consulting partner Peter Lowes advocates a setup similar to what CTO Mark Resmer put in place at eCollege – having staffers work at the remote outsourcing site, side by side with their outsourcing colleagues, in six-month rotations, and vice versa.

In addition, Lowes notes that management success is related to the amount of savings to be had by the outsourcing deal. When you save a lot, you can afford to reinvest in managing the relationship. For example, the Tier 1 offshore software developer companies are usually at a CMM Level 5, while U.S. companies are more often at CMM Level 1. Lowes says that if companies can reinvest the money they've saved by outsourcing to bring themselves up to a CMM Level 3, this will help greatly in bringing them onto the same page as their outsourcing partners.

– JOANIE WEXLER

Continued from page 50

WHEN IS IT WORTH IT?

This year's Premier 100 IT Leaders seem to be learning the appropriate balance for outsourcing and in-house work. For example, Michael H. Hugos, CIO at Network Services Co., an $8.2 billion, 84-company cooperative based in Mount Prospect, Ill., outsources new-systems development and security audits. But he won't go offshore for software work without saving at least $500,000.

"You need a certain scale to overcome the logistics and communications issues that arise," says Hugos, whose company provides IT resources and services for nationwide distributors of food-service items, janitorial supplies and printing paper.

He explains that there are significant time lags associated with sending specifications and code back and forth around the world to conduct testing. "It all takes longer than if you're in the same room," he says. "There's a cost associated with that."

Hugos says his philosophy is to keep IT architectural skills in house, because basic hardware, software and operating system choices are "strategic decisions that we have to live with. But analysis and design work can go outside."

McIntyre says that BNSF determined that it would save on capital expenses with its IBM deal, and although its operating expenses would increase, there would be a net savings of at least 10%.

BNSF also outsources about half of its application development to three offshore companies.

"We felt we could learn something from them, because they are all [Capability Maturity Model] Level 5, which is the price of admission for offshore development companies," McIntyre says. "They're the best at this work, because this is their core business."

CMM is a quality metric for evaluating and measuring the maturity of the software development process of organizations on a scale from 1 to 5, with 5 meaning that the process is optimized.

WHAT NOT TO OUTSOURCE

The one thing eCollege doesn't outsource and says it never will is its call center. While call centers are traditionally a prime outsourcing candidate for many companies, eCollege runs a "private-label," in-house help desk service that it views as strategic to its business.

"Part of [eCollege's] value proposition is quality of the student experience," Resmer explains. That customer service is paramount to eCollege, and the company is best equipped to provide that itself. "I'm a true believer in outsourcing, but you have to outsource wisely," he adds.

Lowes points out that you can't outsource regulatory compliance. He advises having a chief security officer focused on security requirements that apply to the outsourced community, such as policies for access control.

"For example, it's a violation of the Sarbanes-Oxley Act Section 404 if you don't know where your software is being developed or if your outsourcer has further outsourced yout development to someone else," Lowes warns.

OFFSHORE CONSIDERATIONS

It is now traditional in the IT industry to send software development offshore, particularly to India.

"But in the past, we have gotten our fingers burned many times," says Resmer, who insists that outsourcing staffers become part of his own corporate culture in terms of how they work and when they deliver. In other words, Resmer expects the outsourcer to follow its partner's own business processes and internal deadlines, even though workers are technically employed by another company.

"[Otherwise], you might get back a project that does some things right but not the main things. There are fundamental and cultural disconnects in understanding business needs," Resmer says.

To make the relationship successful, eCollege advocates close integration between each executive level at the two companies. CEOs, CTOs, project managers, developers and others at both companies should remain closely aligned as co-workers with their counterparts at the other company at all times, Resmer says.

SOURCES: COMPUTERWORLD PREMIER 100 HONOREES, DELOITTE CONSULTING

And there's one more obstacle to consider. McIntyre says BNSF Railway heard the familiar grumblings from employees and communities that it's un-American to send work offshore. He points out, though, that the railway hasn't laid off a single employee. Previously, he adds, the company used expensive contractors, many of whom weren't interested in converting to full-time employment. The reason, in part, was that they had no competition.

Now, McIntyre says, many of those contractors have converted to full-time employment.

A WINNING FORMULA

There isn't an exact recipe for successful outsourcing. But among the ingredients is keeping strategic decision-making at home while sending out tasks that constitute the core competency of the partner company. Partners should be able to perform tasks in large volume using scalable, repeatable processes that lead to across-the-board savings for many customers.

IT leaders underscore that while a "set and forget" approach would be convenient, leaving a partnership unmanaged is a death knell to outsourcing projects. Successful sourcing, in contrast, requires an IT department to consider its outsourcing partner as an extension of its staff minus much of the overhead, with staff managed and project results measured accordingly.

Wexler is a freelance writer in California's Silicon Valley. Contact her at joanie@jwexler.com.

Managing Relationships And Contracts

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TERRY P. BROOKS
LAWRENCE F. BUETTNER
KATHERINE E. BUSSER

AVERAGE AGE: 47

The most represented states

Virginia	13
Illinois	12
Texas	10
New York	7

Average size of IT staff	1,419
Average size of IT staff for which each honoree is responsible	781
Increased their staff size in the past year	44%
Decreased their staff size in the past year	20%
Had no change in their staffing size	36%

REBECCA A. BLALOCK:

IT Convert

Rebecca "Becky" A. Blalock, 49, is corporate CIO and senior vice president at Southern Co. in Atlanta. A 27-year veteran of the $12 billion energy company, Blalock's first IT job was as one of Southern's five regional CIOs, at subsidiary Georgia Power Co. She recently presided over Project LightNet, a communications network overhaul that's expected to save the company $78 million over 10 years. She talked recently with *Computerworld*'s Gary H. Anthes.

You started out at Southern Co. in finance and accounting and spent 12 years there. How did you end up in IT? I never anticipated I'd be in IT. I had been singled out for my contributions to the company and made assistant to the CEO at Georgia Power. I'd been in that position for six months when . . . the CEO came into my office and offered me the CIO job [at Georgia Power]. I was shell-shocked because I didn't even know what a CIO did. But he said, "Yeah, but you know a lot about information." He was frustrated because he was having a very hard time getting the information he needed to run the business.

You immediately had 650 people in IT under you. Didn't you feel handicapped having no technical background? It became more of a job about leadership than about being a technical expert. What I did was a lot of reverse coaching, and I do that today. I go to the technical experts on my team, and they come up and spend a lot of one-on-one time teaching me. You can't go get a textbook on this stuff — it's changing too fast. Also, I have a wonderful peer group here in Atlanta — at Coca-Cola, GE, Atlanta Power &

Continued on page 58

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THE 2006

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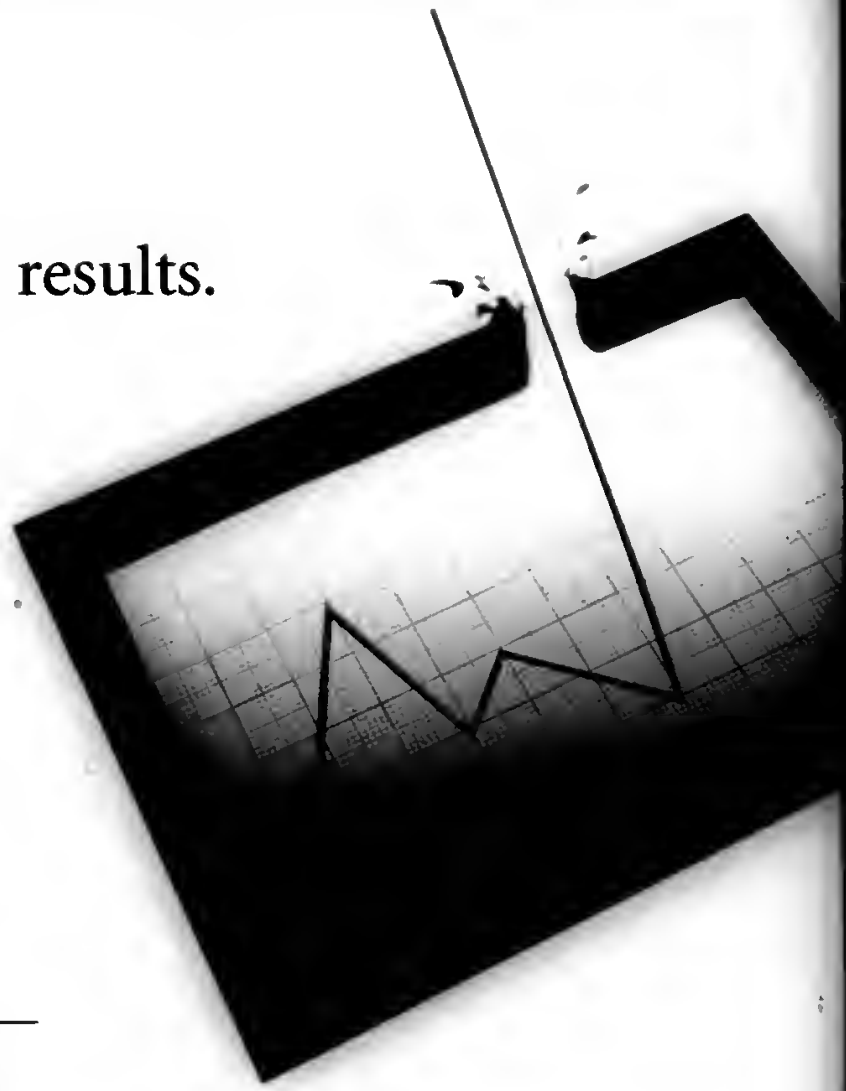

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Security
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"If I had my career to do all over again, I would have gotten more diverse experience earlier in my career. I was always looking for opportunities, but it was hard to branch out into other disciplines. After working in accounting and finance for 12 years, my labor grade got in the way of some opportunities. Eventually, I took a salary cut to move into another organization. I now wish I had been able to do that earlier.

Continued from page 54

Light and Georgia Pacific. I can pick up the phone and ask my peers to help me with anything, and they are there

What was your role in the LightNet project? I'm the one who has to go and get the money for these things. I had to convince the business that we had to make the investment in the infrastructure.

Was that hard? No, the IT organization has a good bit of credibility here. It's because we understand the business. A lot of times, IT groups try to communicate with the business in IT terms instead of their terms. They don't understand that, so they're seen as a cost center.

Between finance and IT, you did a stint in economic development. How did that happen? I'd always been fascinated by that. I took a two-grade demotion for a job in Georgia Power's economic development office. I always tell young people, sometimes the quickest way to the top is not straight up. I've had 12 jobs in seven different functional areas, and I've taken three laterals.

That's pretty brave. I'm a very adaptable person. I'm a risk-taker, and I'm not afraid of change.

What's your next step? I love being in IT. In my wildest dreams I never thought I'd be this happy in a job, and I can't imagine going anywhere else. But I have five possible successors — all five of my regional CIOs.

What advice will you give your successor? First, learn the technology trends. Second, learn the needs of the business and how IT can address them. Third, build your public-speaking skills. Be very public in speaking out about the great things that are going on in this company. ▸

TERRY P. BROOKS: Multitask Juggler

Terry P. Brooks, 51, division manager of information services at Yamaha Motor Corporation U.S.A., is already thinking through IT issues before most people are out of bed. Here's what a typical day looks like for this IT leader, who manages about 125 people and is responsible for long-term IT strategy at Yamaha.

Up bright and early, Brooks says he does some of his best thinking in the shower. "I joke about the shower thing, but it really does work. A lot of stuff is percolating in your mind, and you just need that isolation to gather your thoughts together," says Brooks. His 25-minute drive to work offers more time to reflect.

At his Cypress, Calif., office, Brooks begins his morning by checking the 100 to 150 e-mails he receives every day. He opens and reads the important ones, responding to them throughout the day. Some, he just doesn't get to.

"E-mail is a fundamental part of the business," he says. "I think part of the reason is that we're a Japanese company, and when things are written down, it's much easier to make sure there's some level of understanding because of the language barrier. When something is written down, the English-limited members of the company get a chance to read through it three or four times and figure out what it really means."

After handling e-mail, Brooks deals with various issues, including the company's midterm and five-year IT vision plan. He also devotes anywhere from three to eight hours a week to budget matters. But mostly his job is to facilitate the operation by providing guidance and support to business managers.

"I try not to be on the front line of fighting fires unless they're already elevated to some kind of executive level," he says. "Most of the time, my people know what to do. They don't need me hounding them to see whether they've done it or not."

At lunchtime, Brooks usually goes out for a sandwich, which he brings back to the office to eat at his desk.

There's no such thing as a typical afternoon for Brooks, who says one of his biggest challenges is switching between wildly different tasks. One minute, he may be dealing with a low-level problem such as a decision about whether a particular employee should get a laptop, and the next minute, he's talking to a company vice president or president about how systems can help the company's sales programs. And then he may have to deal with an employee's personal health situation.

"That's the real challenge – being able to change gears all the time," he says.

Brooks says he tries not to deal with vendors or the press during the regular workday because that can become a distraction. Instead, he tries to set aside some time on Fridays to deal with external matters, he says.

"I'm focused on delivering what we've committed to. We've been really, really busy the past two or three years, so my day is pretty full," says Brooks, who turns out the light and heads for home sometime between 6:30 and 8:30 p.m., most likely doing some more strategic thinking on the way.

– LINDA ROSENCRANCE

100 PREMIER IT LEADERS 2006

- **JULIE F. BUTCHER**, vice president of information technology, MDC Holdings Inc., Centennial, Colo
- **LAYNOLYN M. CAPERS**, vice president, United Parcel Service Inc., Timonium, Md
- **BARBARA D. CARLINI**, North America CIO, Diageo North America Inc., Norwalk, Conn
- **ANDRES E. CARVALLO**, CIO, Austin Energy, Austin, Texas
- **GUY CHIARELLO**, CIO and CTO, Morgan Stanley Securities, Morgan Stanley, New York
- **KATHY J. CLAYPATCH**, director, online IT operations, University of Phoenix Online, Phoenix
- **HAP M. CLIFF**, director of IT, city of Norfolk, Va.
- **GEORGE F. COULTER**, vice president, CIO, The AES Corp., Arlington, Va
- **HELEN Z. COUSINS**, senior vice president and CIO, Dex Media Inc., Englewood, Colo
- **JAY C. CROTTS**, CIO, Shell Lubricants/B2B, Royal Dutch Shell PLC, London

CAREER ADVICE

"The most valuable pieces of career advice I've ever received center around respect and integrity. Specifically, treat everyone – at all levels – with respect . . . especially when delivering difficult messages. I've also learned that maintaining a healthy work-life balance can be the difference between short- and long-term success."

GUY CHIARELLO, CIO AND CTO, MORGAN STANLEY SECURITIES, MORGAN STANLEY

- **FRED R. DANBACK**, vice president, global technology, XL Global Services Inc., Stamford, Conn.
- **NIDA S. DAVIS**, chief architect, Federal Reserve System, Richmond, Va.
- **PAUL M. DE GRAAFF**, chief information security architect, The Depository Trust & Clearing Corp., New York

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LEADER DO-OVER

If I had my career to do all over again, I would have gotten more diverse experience earlier in my career. I was always looking for opportunities, but it was hard to branch out into other disciplines. After working in accounting and finance for 12 years, my labor grade got in the way of some opportunities. Eventually, I took a salary cut to move into another organization. I now wish I had been able to do that earlier.

REBECCA A. BLALOCK, SENIOR VICE PRESIDENT AND CORPORATE CIO, SOUTHERN CO., ATLANTA

Continued from page 54

Light and Georgia Pacific. I can pick up the phone and ask my peers to help me with anything, and they are there.

What was your role in the LightMat project? I'm the one who has to go and get the money for these things. I had to convince the business that we had to make the investment in the infrastructure.

Was that hard? No, the IT organization has a good bit of credibility here. It's because we understand the business. A lot of times, IT groups try to communicate with the business in IT terms instead of their terms. They don't understand that, so they're seen as a cost center.

Between finance and IT, you did a stint in economic development. How did that happen? I'd always been fascinated by that. I took a two-grade demotion for a job in Georgia Power's economic development office. I always tell young people, sometimes the quickest way to the top is not straight up. I've had 12 jobs in seven different functional areas, and I've taken three laterals.

That's pretty brave. I'm a very adaptable person. I'm a risk-taker, and I'm not afraid of change.

What's your next step? I love being in IT. In my wildest dreams I never thought I'd be this happy in a job, and I can't imagine going anywhere else. But I have five possible successors — all five of my regional CIOs.

What advice will you give your successor? First, learn the technology trends. Second, learn the needs of the business and how IT can address them. Third, build your public-speaking skills. Be very public in speaking out about the great things that are going on in this company. »

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MDC's often leaves her office door open so "folks can drop by."

JULIE F. BUTCHER: Master Organizer

A DAY IN THE LIFE

For Julie F. Butcher, vice president of IT at home builder MDC Holdings Inc. in Centennial, Colo., the day starts early and ends late, with few quiet moments in between. Here's an inside look at a day in the life of one of the country's top CIOs.

A typical day starts with a stack of paperwork – purchase requests, project documentation, expense reports and the like. And with an IT staff of 145 and 28 divisions across the country to support, there's plenty of it.

Today, however, the paperwork will have to wait. Butcher is informed that there's a virus outbreak to contend with. "The first thing we do is pull everyone together," she says. The IT staff goes over the damage and possible corrective measures. Generally, there's at least one fire to put out every week, Butcher notes.

The rest of the morning is devoted to meetings. Butcher says that about 50% of the meetings she attends are related to day-to-day operations and project management issues. "Looking at the bigger picture is the hardest thing," she says.

Once a week, though, Butcher meets with company directors and uses a portion of that time to look further out. And usually once a month, the IT staff "buries itself in a room for a couple days" to discuss long-term strategic plans, she says. "We don't talk about the fire of the day."

At lunchtime, Butcher puts in an order at the nearby sandwich shop. She occasionally goes out for a working lunch with company directors, team members or vendors, but she says she likes to spend at least part of the afternoon in her office with the door open so "folks can drop by."

"It allows me to interact with my team," Butcher notes. The discussion may be around a new IT project or a new car someone just bought. "My favorite thing is when they come to me and say, 'I have this issue,' " Butcher says. "I like those brief opportunities to coach."

Butcher spends the remainder of the afternoon in more meetings. Those may include contract negotiations, one-on-one discussions with direct reports, Sarbanes-Oxley reviews or budget planning sessions.

And, of course, there's e-mail to deal with, but that happens mostly after Butcher gets home and starts her "second shift."

> The worst decision I've made in my career was leaving a position and a company that I adored for the potential of huge financial gains through stock options, thinking that the position would open many more opportunities for me and my family. The new position was boring, the company culture conflicted with my core values, and ultimately, the options were worthless.

"I try to leave work early enough to spend time with my family," Butcher explains. After her children finish their homework, typically around 8 p.m., Butcher starts up her PC and tackles the 200-plus e-mails she receives every day – a big chunk of them from vendors. "I stay in touch with vendors as much as I can, but that needs to be managed well," she says. "It can become overwhelming."

But the biggest everyday challenge, Butcher says, is keeping people focused on providing quality service and delivering what the business needs.

"On any given day, with 100-plus people, anyone could be down, tired, frustrated," she says. "I try to be consistent and keep an even temperament. If you leave blanks, people will fill them – and not always with something positive."

–MONICA SAMBATARO

PREMIER 100 IT LEADERS 2006

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- **JON T. ELSASSER**, senior vice president and CIO, The Timken Co., Canton, Ohio
- **JOHN F. FISHER**, senior vice president and CIO, SmithBucklin Corp., Chicago
- **ROBERT FORT**, director of IT, Virgin Entertainment Group, Los Angeles
- **WENDELL FOX**, senior vice president, North American Information Resources Field Services, Marriott International Inc., Washington
- **BILL FRANKS**, executive vice president and CIO, Saks Inc., Jackson, Miss.
- **ROLAND A. GARCIA**, senior vice president and CIO, Baptist Health of Northeast Florida, Jacksonville
- **DON GIBSON**, managing director of IT, FedEx Services, Irving, Texas
- **JOHN P. GLASER**, vice president and CIO, Partners HealthCare System Inc., Boston
- **FARZAD GOLSHANI**, vice president of IT infrastructure, Transamerica Retirement Services, Los Angeles
- **LEV S. GONICK**, vice president for information technology services and CIO, Case Western Reserve University, Cleveland
- **ERIC GORHAM**, director of IT, Regional Justice Information Service, St. Louis
- **DON GOULD**, director of IT, Godiva Chocolatier Inc., Reading, Pa.

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> **"Always take responsibility for your own career development. You may have mentors or sponsors, but ultimately you are responsible for your own career progression by taking responsibilities and creating opportunities."**
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PATRICIA BARRY LEVY

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IN MEMORIAM: Gerard Higgins

A benchmark is defined as a standard used for comparison. It's a term usually reserved for measures, but I've had the honor of working with a person who fits the definition – Gerry Higgins, vice president of Verizon's IT infrastructure (or VIPS, as it's know internally).

Sadly, Gerry passed away on Nov. 16, just as *Computerworld* was preparing to honor him as an IT leader, an award for which I nominated him.

One of the notices of his death tells a lot of the story. It isn't a headline you'd expect to see about a technology leader: "Gerry Higgins, Borough of Manhattan Community College Board Member Who Saved Many Lives Through Organ Donation Programs, Dies at 58."

The college's notice recounted some of Gerry's history. "Born in Bay Ridge, Brooklyn, he began his career as a systems engineer at IBM and quickly rose to senior strategist. He eventually joined Nynex as senior vice president. When Nynex and Bell Atlantic merged to become Verizon, he was named vice president for information processing and oversaw a companywide restructuring that resulted in cost savings of over $400 million."

That tells part of Gerry's story, but there's more. When IT leaders around the world asked me to offer a benchmark for infrastructure operations, performance and economics, I always pointed them to Gerry and his beloved VIPS organization. VIPS's benchmark performance was about a culture, about a mind-set and about a team – all a reflection of Gerry. It wasn't just the numbers. He was a benchmark beyond and foremost outside of the office – with family, friends and the organizations to which he gave his time and support.

Gerry survived a kidney transplant, liver cancer and more. In his last days, he was running VIPS with full energy through a fully wired remote environment linked to his team.

Gerry was best in class as a leader, a professional, a family man and a friend.

He is missed but not gone. His legacy is his benchmark and the knowledge he passed along to others. I am proud to have worked with him, proud to have learned from him and even prouder that he is being recognized as a Premier 100 IT Leader.

– **HOWARD RUBIN**, PROFESSOR EMERITUS, HUNTER COLLEGE OF THE CITY UNIVERSITY OF NEW YORK AND SENIOR GARTNER INC. ADVISER

BARBARA D. CARLINI:

PREMIER 100 IT LEADERS 2006

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SCOTT D. GRIFFIN, vice president and CIO, The Boeing Co., Chicago

ELIZABETH HACKENSON, executive vice president and CIO, MCI Inc., Ashburn, Va.

MITCHELL J. HANSEN, vice president, enterprise systems and services, Quest Diagnostics Inc., Lyndhurst, N.J.

CARLTON C. HARPER, CIO, Modine Manufacturing Co., Racine, Wis.

GERARD M. HIGGINS, senior vice president, Verizon Information Processing Services, Verizon Wireless, New York

ROBERT G. HOLSTEIN, CIO and vice president for IT, National Public Radio, Washington

MICHAEL H. HUGOS, CIO, Network Services Co., Mount Prospect, Ill.

T. CHARLES HUNSINGER, vice president of software engineering, Corporate Express Inc., Broomfield, Colo.

AL R. IANNEMMO JR., director of the e-business division, Federal Supply Service, General Services Administration, Arlington, Va.

STEVEN A. JOHN, CIO, AgriLance LLC, Inver Grove Heights, Minn.

MICHAEL L. JONES, senior vice president and CIO, Circuit City Stores Inc., Richmond, Va.

CONTINUED ON PAGE 66

CAREER ADVICE

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LEV S. GONICK: Community Liaison

As CIO and vice president of information technology services at Case Western Reserve University in Cleveland, **Lev S. Gonick**, 46, works with 191 IT employees and provides stewardship of a $38 million IT budget.

This past year, Gonick and his staff launched the OneCleveland network, which has a fiber-optic backbone. They used Gigabit Ethernet optical gear to create an intranet for Case and more than 100 educational institutions, research organizations, health care facilities, libraries, government agencies and cultural organizations in northeast Ohio. The award-winning project increased bandwidth by a factor of up to 1,000, cut Internet connectivity costs by more than half and enabled a collaborative environment that includes joint application development among Case, the Cleveland School District, the Cleveland Museum of Art and other local institutions. Gonick took time out recently to talk with *Computerworld*'s Marc L. Songini about leadership and the changing role of IT.

Where do you see the IT leader's role heading? As our industry has matured over the past 20 years, the successful IT leadership style has evolved from autocratic to hands-off to what I call the "open-source" leadership style.

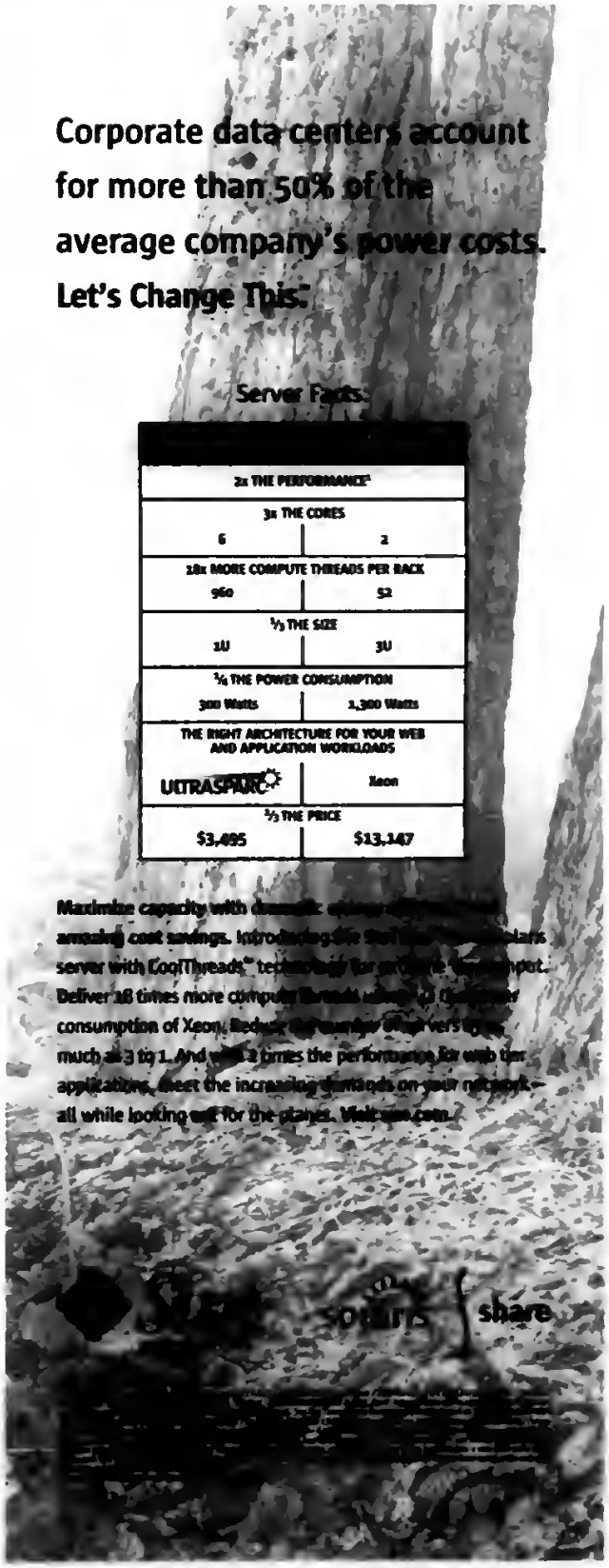
Today's style is much more focused on contributing to the top line of the organization through a deliberate sharing of power with key business owners. But with an emphasis on participatory leadership and leading through example, I think open-source leaders live with considerably more ambiguity and a focus on the short term.

How do you determine which metrics indicate real success? Generally, in the higher-education segment, the most important goal is to support the core mission of instruction and research. In addition to a robust infrastructure, other critical components include the provisioning of collaborative tools, applications and services that enable students and faculty to be successful in the learning, teaching and research space. There are measurable outcomes: One is student success. We also measure success around research dollars raised, student applicants, student grades and other factors.

How do you lead within your own department? In a large and decentralized organization such as Case, I see my leadership responsibilities largely framed in terms of coordinating the autonomy of each of the key business units. Understanding customer needs and mobilizing my team to deliver value is also a key part of my mission.

What's an example of that? OneCleveland, an ambitious community-centered initiative to extend gigabit networking and ubiquitous wireless services to hundreds of Cleveland's public-sector agencies and not-for-profits. It connects several hundred thousand end users to a gigabit fiber-optic network. It's a community-owned asset in which we have lit more than 5,000 hot spots for access. Museums and schools are leveraging the most important educational assets in the city. We got 85,000 users connected in two weeks, all in gigabit fiber optic.

What's the next year look like? Over the next 12 to 18 months, Case and OneCleveland, along with our strategic partners, will roll out application services in areas like community [utility] computing, grid technologies for economic development, networked electronic medical records, health care education for middle and high schools, and e-government services. ▸



PREMIER 100 IT LEADERS 2006

- **RAYMOND KARRENBAUER**, CTO, ING Insurance Americas, Hartford, Conn.
- **BARBARA KOSTER**, senior vice president and CIO, Prudential Financial Inc., Roseland, N.J.
- **MICHAEL B. KOVAL**, senior vice president and CIO, Long & Foster Real Estate Inc., Fairfax, Va.
- **KATHY S. LANE**, senior vice president and CIO, The Gillette Co., Boston
- **PATRICK LAW**, vice president of infrastructure, American Modern Insurance Group Inc., Amelia, Ohio
- **WILLIAM J. LEWKOWSKI**, CIO, Metropolitan Health Corp., Grand Rapids, Mich.
- **DENNIS P. L'HEUREUX**, senior vice president of planning and CIO, Rockford Health System, Rockford, Ill.
- **MATTHEW J. LYNCH**, senior vice president and CIO, ShopKo Stores Inc., Green Bay, Wis.
- **SAURYENDRA MATHUR**, vice president, IT, Americas Region, Hewlett-Packard Co., Houston
- **MARGARET McCARTHY**, senior vice president and CIO, Aetna Inc., Hartford, Conn.
- **JOSEPH T. McCARTIN**, senior vice president and CIO, National City Corp., Cleveland
- **JEFFREY B. McINTYRE**, assistant vice president of technology services, BNSF Railway Co., Fort Worth, Texas
- **GREGORY J. MEFFERT**, CTO and CIO, city of New Orleans

CONTINUED ON PAGE 68

WORDS OF WISDOM

Words of advice, in some cases spoken decades ago, have stuck with these five Premier 100 IT Leaders, forming the basis for their own leadership styles. Here they recount the most valuable career advice they've ever received.

"Focus on the external world. Work backward from where the industry and the competition are headed. Pay attention to what matters to the consumer, and always drive to create value based on what the business needs to succeed."

KATHERINE E. DUDDER, CIO, U.S. CARD DIVISION; VICE PRESIDENT, CAPITAL ONE FINANCIAL CORP., RICHMOND, VA

"A leader once told me, 'Take care of the company's best interests and the company will take care of yours.' I took that thought to heart, and for the most part, it has worked well for me."

JULIE F. DUTCHER, VICE PRESIDENT OF IT, MDC HOLDINGS INC., CENTENNIAL, COLO.

"Commitment, dedication, honesty and hard work always pay off in the end, not necessarily in financial terms but in personal satisfaction and fulfillment."

ERIC GORMAN, DIRECTOR OF IT, REGIONAL JUSTICE INFORMATION SERVICE, ST. LOUIS

"Whatever your job, you should communicate clearly and honestly. And whatever you say you are going to do, follow through and do it. These 'simple' things will help very effectively build and maintain your credibility. (And the absence of them can quickly lose it for you!)"

T. CHARLES WIMBERGER, VICE PRESIDENT OF SOFTWARE ENGINEERING, CORPORATE EXPRESS INC., BROOMFIELD, COLO.

"Advice from my father: Make your job your hobby, because you will spend most of your time doing it and you might as well enjoy it!"

PAUL G. DE GRAMPP, CHIEF INFORMATION SECURITY ARCHITECT, THE DEPOSITORY TRUST & CLEARING CORP., NEW YORK

101

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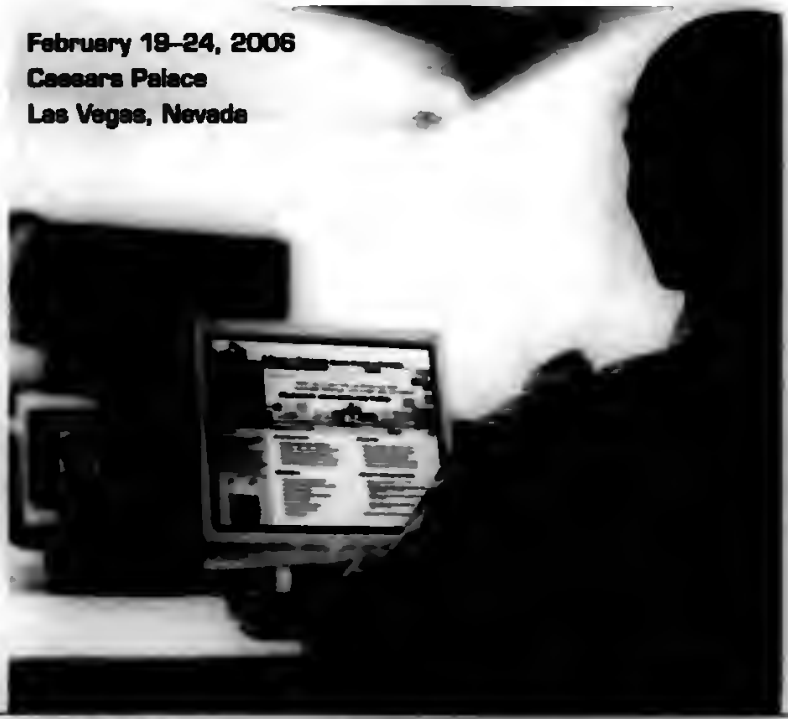

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PREMIER 100
IT LEADERS 2006

ENZO MICALI, senior vice president and CIO, 1-800-Flowers.com Inc., Westbury, N.Y.

DENNIS E. MICHAEL, vice president of IT and strategic planning, Watkins Motor Lines Inc., Lakeland, Fla.

EARL R. MONSOUR, director of strategic information technologies, Maricopa Community College District, Tempe, Ariz.

PATRICK E. MORONEY, senior vice president and CIO, Health Care Service Corp., Chicago

PAUL R. MUELLER, vice president of technology services, Schneider National Inc., Green Bay, Wis.

CONTINUED ON PAGE 70

"I try to speak to [business executives] in a language they would understand," says executive vice president and CIO at MCI.

PHOTO BY LAMBERT

ELIZABETH HACKENSON: Business Booster

Elizabeth Hackenson, 45, executive vice president and CIO at MCI Inc., began her career more than 25 years ago as a data entry clerk at Univac. After that, she worked at systems integrator Electronic Data Systems Corp. and Concert Communications Services, where she had a business role in building new products. She began her career at MCI as a vice president heading up strategic development for CRM and consolidated billing projects before she became CIO in October 2004. She recently spoke with *Computerworld*'s Heather Havenstein.

You have said that leading your company through the current technology renaissance is one of your most difficult challenges. What do you mean by a "technology renaissance," and how are you tackling the challenge? People are beginning to talk about the Internet and how it is changing the way their companies operate now more than ever before. You now have information on your customer base you never had before. Companies are actually transacting business over the Internet.

IT can really become overwhelming to executives who are not technologists. I try to speak to them in a language they would understand. I would not launch into a conversation about XML. I would have a conversation with them about their business problem and the process and how we would solve it.

You recently began a project to use Web services with a cable partner for order management and to manage trouble ticketing. What were some of the challenges associated with this project? We were faced with a seven-to-10-day response just to accept an order and validate it. That was not something that either company could continue . . . and achieve the goals we had. We knew we had this capability of a Web service that would open up access between the two companies and allow us to communicate over the Internet. We wanted to reuse this type of interface, and so did our partner. When we were working with developers, they seemed to forget about the basic process map you have to build about what you want to automate. You have to think about all the errors that could occur. These weren't new questions. . . . People just for some reason thought that some type of magic occurred on the Internet.

It is key to have the people who need to build these interfaces build relationships and sit down and look at the same piece of paper and the same process flow and ask about the what-ifs. We literally took a seven-to-10-day order process to one that now takes minutes, including error handling.

Your management philosophy includes "stretching" employees, having them switch from a familiar job role to a new one. What's the impetus behind that? Working for 15 years at a systems integrator, every six to nine months I parachuted into a new environment, a new location and a new business challenge. It taught me to think on my feet. In many cases, it was way beyond my comfort zone, but I always had the attitude that I am not an expert but I am really going to try and I am going to learn something. That type of moving around is not typically in the DNA at MCI. Many people have become experts in certain domains. I am trying to help them expand, to do new things. We had a great business leader in service delivery who knew the process and could interface back to IT. She moved over to director of a development organization, and now she can see what it is like being in IT and delivering the business demands she used to ask for a year ago.

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CONTINUED ON PAGE 70

PHOTOGRAPHING LAMBERT

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100 PREMIER IT LEADERS 2006

DIANE P. MURRAY vice president and CIO, Mission Systems sector, Northrop Grumman Corp., Reston, Va.

RAJESH NARANG chief system manager, Centre for Railway Information System, Chanakya Puri, New Delhi

STEVEN L. NAYLOR vice president and director of IT, Federal Home Loan Bank of Topeka, Kansas

TOM NEALON senior vice president and CIO, Southwest Airlines Co., Dallas

DIANAH L. NEFF CIO, city of Philadelphia

TOM OELSNER program director, remote services, Heidelberger Druckmaschinen AG, Heidelberg, Germany

DAVID A. OLES IT director of research and development, Rent-A-Center Inc., Plano, Texas

RICHARD H. OMARTIAN IT chief financial officer and chief of staff, The Guardian Life Insurance Company of America, New York

SCOTT A. PAINTER director of data center operations, Cardinal Health Inc., Dublin, Ohio

KAY J. PALMER CIO and executive vice president of IT, J.B. Hunt Transport Services Inc., Lowell, Ark.

MICHAEL T. PARISI director of IT infrastructure integration and strategy, Honeywell Automation & Control Solutions, Arlington Heights, Ill.

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SOURCE: 2006 PREMIER 100 IT LEADERS

"My worst decision was resigning from a stable work environment to follow a dream that wasn't well thought out. Early in my career, I resigned from a company to pursue self-employment without the advice of a mentor or professional guidance. This attempt sadly failed but taught me a valuable lesson about solid preparation and logical execution.

JOHN SULLIVAN: IT Adventurer

43

CIO

The American Chemical Society (ACS), a Washington-based professional organization for chemists and people in related occupations that publishes 30 journals and magazines.

110

CIO at AARP, a nonprofit that provides products and services to citizens age 50 and older.

At AARP, Sullivan implemented Web services technology that integrates the organization's internal applications with those of the myriad business partners that deliver products and services to members, transforming the way AARP and its members and partner companies interact. Members can now get timely and accurate responses to requests through Web-based self-service options or by going directly to a provider, instead of having to contact multiple parties. Access to information in AARP's membership systems allows partner companies to enroll members in programs and begin providing benefits in a single call, as well as offer additional products and services.

The success of the AARP effort motivated Sullivan's move to the American Chemical Society. "I wanted to build something at AARP," he says. "Now I want to do it again. I get excited over the mission of an organization that has a positive impact on society."

Sullivan says he leads "from behind," creating an environment in which others "welcome you to the table" and invite you to lead. "That style may not work in other cultures, but it works in nonprofit environments" that are run by volunteers, he says. "Once you're viewed as a leader, you're given opportunities to extend your skills. If you are genuine and honest, people will follow you."

Accept assignments that are "slightly unexpected" for an IT person. That lets you "face different kinds of challenges that help create a good leader," he says. At AARP, for example, Sullivan volunteered to lead a business process re-engineering effort focusing on how members navigate through the organization as a whole, not just the Web site. "It was an opportunity to be in front of the whole organization and demonstrate leadership skills – and to improve the business, not just the technology."

Family time, and community and church activities. "Sometimes I'll show up at a zoning board meeting to speak about some aspect of development," Sullivan says. "I gravitate toward those types of things." He's also a Cub Scout leader, a "marginal but enthusiastic" fisherman, a golfer (when time permits) and a fantasy football fan.

***Collapse*, by Jared Diamond; *Blink*, by Malcolm Gladwell; *In Praise of Slowness*, by Carl Honoré; *The Kite Runner*, by Khaled Hosseini; the sports page. ("It's sometimes a hard choice between the sports page and 'real' reading.")**

None. "I keep getting presented with wonderful missions," Sullivan says. "I wake up every day excited about what I do. At ACS, it's to improve the world through better science. My pattern indicates that when my mission is done at one organization, I will likely find another. I won't get rich, but the rewards are so great."

– MONICA SAMBATARO

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CONTINUED ON PAGE 72

LEADER DO-OVER

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STEVEN L. NAYLOR, VICE PRESIDENT AND DIRECTOR OF IT, FEDERAL HOME LOAN BANK OF TOPEKA, KANSAS

SOURCE: 2006 PREMIER 100 IT LEADERS

JOHN SULLIVAN:

IT Adventurer

AGE: 43

TITLE: CIO

ORGANIZATION: The American Chemical Society (ACS), a Washington-based professional organization for chemists and people in related occupations that publishes 30 journals and magazines.

IT STAFF: 100

PREVIOUS POST: CIO at AARP, a nonprofit that provides products and services to citizens age 50 and older.

LATEST ACCOMPLISHMENT: At AARP, Sullivan implemented Web services technology that integrates the organization's internal applications with those of the major business partners that deliver products and services to members, transforming the way AARP and its members and partner companies interact. Members can now get timely and accurate responses to requests through Web-based self-service options or by going directly to a provider, instead of having to contact multiple parties. Access to information in AARP's membership systems allows partner companies to enroll members in programs and begin providing benefits in a single call, as well as offer additional products and services.

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TIP FOR FUTURE IT LEADERS: Accept assignments that are "slightly unexpected" for an IT person. That lets you "learn different kinds of challenges that help create a good leader," he says. At AARP, for example, Sullivan volunteered to lead a business process re-engineering effort focusing on how members navigate through the organization as a whole, not just the Web site. "I was an opportunity to be in front of the whole organization and demonstrate leadership skills -- and to improve the business, not just the technology."

OTHER INTERESTS: Family time, and community and church activities. "Sometimes I'll show up at a zoning board meeting to speak about some aspect of development," Sullivan says. "I gravitate toward those types of things." He's also a Cub Scout leader, a "marginal but enthusiastic" fisherman, a golfer (when time permits) and a fantasy football fan.

LATEST READS: *Collapse*, by Jared Diamond; *Blink*, by Malcolm Gladwell; *In Praise of Slowness*, by Carl Honoré; *The Alibi Hour*, by Khaled Hosseini; the sports page. ("It's sometimes a hard choice between the sports page and 'real' reading.")

RETIREMENT PLANS: None. "I keep getting presented with wonderful missions," Sullivan says. "I wake up every day excited about what I do. At ACS, it's to improve the world through better science. My pattern indicates that when my mission is done at one organization, I will likely find another. I won't get rich, but the rewards are so great."

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- **MARK S. POPOLANO**, president, AIG Technologies Inc., CIO and senior vice president, American International Group Inc., New York
- **AL-NOOR RAMJI**, BT Group CIO and BT Exact CEO, BT Group PLC, London
- **TOBY EDUARDO REDSHAW**, corporate vice president of IT strategy, architecture and e-business, Motorola Inc., Schaumburg, Ill.
- **BILL REGEHR**, senior vice president of IT and CIO, Boys & Girls Clubs of America, Atlanta
- **MARK A. RESMER**, chief technology officer, Whitney University, Dallas (formerly corporate CTO, eCollege, Denver)
- **GEORGE C. RIMNAC**, vice president and chief technologist, W.W. Grainger Inc., Lake Forest, Ill.
- **MICHAEL J. ROCHE**, senior vice president, protection technology and administration, Allstate Insurance Co., Northbrook, Ill.
- **JOHN F. SCHINDLER**, CIO, Kichler Lighting, Cleveland

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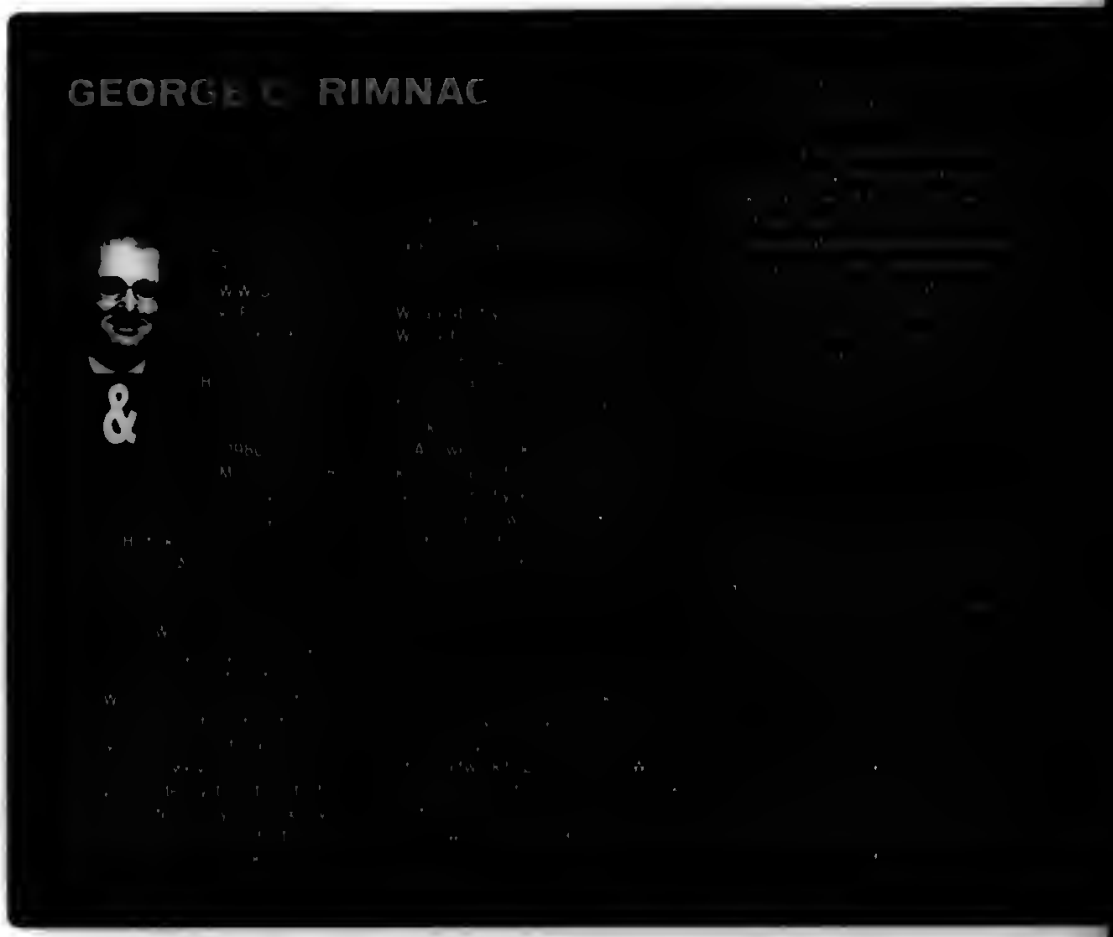
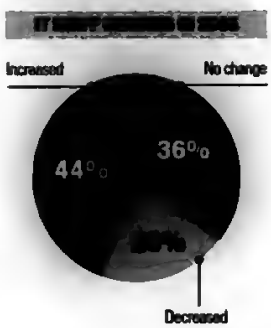


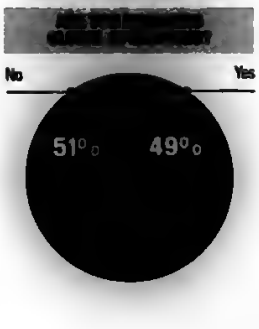
STAFFING MATTERS

How IT hires joined almost half the companies represented by this year's Premier 100 honorees in the past year.



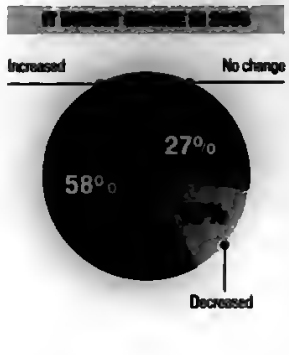
GLOBAL OUTREACH

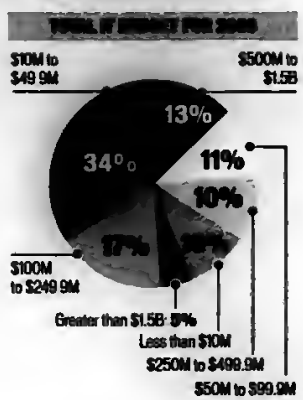
Nearly half of this year's honorees report having a hand in their company's IT efforts outside the U.S.



SPENDING POWER

More than half of the 2006 IT leaders stewarded IT budgets that grew year over year, on average by 13%.





SOURCE: 2006 PREMIER 100 IT LEADERS

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- **JOHN F. SCHINDLER**, CIO, Kichler Lighting, Cleveland

CONTINUED ON PAGE 74

&

SOURCE: 2006 PREMIER 100 IT LEADERS

How will you optimize IT cost and performance?
How will you drive out unnecessary complexity?
How will you manage IT business risk and compliance?
How will you cultivate IT governance and leadership?
How will you improve sourcing competency?

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- **TOM H. SCOTT**, executive vice president of operations and CIO, Direct Holdings Worldwide LLC, Virginia Beach, Va.
- **ESAT SEZER**, corporate vice president and CIO, Whirlpool Corp., Benton Harbor, Mich.
- **STEVE D. SILVERMAN**, vice president of IT, Bausch & Lomb Inc., Rochester, N.Y.
- **SHERI STAMLER**, associate vice president of academic computer services, Temple University, Philadelphia
- **JOHN T. STANKEY**, senior executive vice president and CTO, SBC Communications Inc., San Antonio
- **JOHN SULLIVAN**, CIO, American Chemical Society, Washington (formerly CIO, AARP, Washington)
- **MICHAEL C. THEIS**, chief of cyber counterintelligence, National Reconnaissance Office, Chantilly, Va.
- **KEITH J. THIBODEAUX**, CIO, Lafayette Consolidated Government, Lafayette, La.
- **LARRY S. THOMAS**, vice president and CIO, Landstar System Inc., Jacksonville, Fla.
- **JOHN L. TRESCHINGER**, vice president and CIO, GlobalSantaFe Corp., Houston
- **BILL A. TUCKER**, vice president of systems delivery, Nordstrom Inc., Seattle
- **WADE VANN**, senior vice president of IT and CIO, Simmons Bedding Co., Atlanta
- **MARC WEST**, senior vice president and CIO, H&R Block Inc., Kansas City, Mo.
- **WILLIAM W. WESTRATE**, formerly vice president and CIO, Aramark Corp., Downers Grove, Ill.
- **LAURIE S. ZEITLIN**, senior vice president and CIO, FedEx Kinko's, Dallas
- **DAVID L. ZEPPIERI**, assistant administrator and CIO, Transportation Security Administration, Arlington, Va.

MARK POPOLANO: Master of Details

A glance at a single day's jam-packed schedule for Mark Popolano, 48, senior vice president and CIO at American International Group Inc. (AIG), offers insight into the approach he favors for managing the global IT operations of the international insurance and financial services conglomerate.

His calendar on one autumn Monday lists eight meetings, but his day begins long before the first one, scheduled for 9 a'clock.

5 A.M.

Popolano departs from his New Jersey home for AIG's headquarters on Pine Street in New York. On other days, he might commute to AIG's office in Jersey City, N.J., or to the company's data center in Livingston, N.J. Through the magic of voice over IP, one telephone number locates him at any of his three offices.

6 A.M.

Popolano reads and answers e-mail, then reviews information from the prior night's data center activity, including application upgrades, patch deployments, security issues, remediation work and telecommunications updates. He prepares for the day's meetings by reading reports that staff members have prepared. On some mornings, Popolano holds 7:30 a.m. breakfast meetings, either with external technology vendors or with his staff. He sometimes schedules "meet the CIO" sessions where a hundred or so of his employees can query him about strategies or standards.

9 A.M. TO NOON

Popolano conducts a budget and strategy review with the divisional CIO at AIG United Guaranty Corp., followed by an update with executives from the domestic brokerage group.

He then holds a planning session with the chief technology officer to plot "next-generation networks" and data center virtualization efforts.

NOON TO 1:30 P.M.

Not surprisingly, Popolano typically has a working lunch. That might mean a tête-à-tête with a consultant or vendor on the top floor of AIG's 65-story Pine Street building. Or it could mean a sandwich at his desk or pizza with staffers at the data center in Livingston. "Whatever is required to get the job done," he says.

Popolano prefers the detailed view from the 100-foot level to the vast landscape he'd see from 20,000 feet. He says he likes granularity. He calls it "management by walking around."

"You have to know the details because you may have to do modifications of your strategy very quickly," Popolano explains.

He says he has seven to 13 meetings every day. Mondays are generally reserved for strategy sessions and quality time with the CTO and divisional CIOs. Tuesdays and Wednesdays are set aside for AIG's various divisions and external business partners. Thursdays and Fridays are devoted to the data center group and an infrastructure consolidation initiative. "Even though it may seem like a lot of meetings, it's just simply the pace of work," he says. "There is actually time where we shut down and go off-site and do strategies and things of that nature."

1:30 P.M. TO 5 P.M.

Popolano starts the afternoon with a meeting on Internet initiatives with the chief financial officer, a divisional CIO and business executives. That's followed by a status report on deliverables for the domestic brokerage group, with 23 executives on hand. Then there's a budget/strategy update for the personal lines division with that group's CIO, the CFO and other business executives.

The first three months of the year are spent planning, both for the year and long term. In the succeeding months, short-term tactical deliverables become the key areas of focus. And at year's end, the process restarts and rolls into the next year.

Popolano has 13 direct reports who are either senior vice presidents or divisional CIOs. Another nine CIOs at AIG member companies also check in. The IT organization is "mapped to how the company was organized," Popolano notes.

"We created hierarchical structures," he says. "It was much more granular at one point. Now we have a series of senior people that have taken consolidated roles."

Although AIG is moving closer to a centralized model, it's currently a highly decentralized organization, according to Popolano. That has necessitated a "federated" approach for setting up compliance, governance and deliverables with the company's various divisions and 31 member companies spanning 130 countries.

In addition to gathering data from his staff, Popolano collects information from the security group, the executive project management office and an organization responsible for business transformation and offshore development centers. He estimates that he spends about 35% of his time on the road – mostly to visit AIG offices around the country.

"I constantly get fed data that allows me to steer the organization in the directions that bring us the best opportunity," Popolano says. "But it requires a lot of time, and I have an organization around me that helps drive it as well. It's not done just by myself. Trust me."

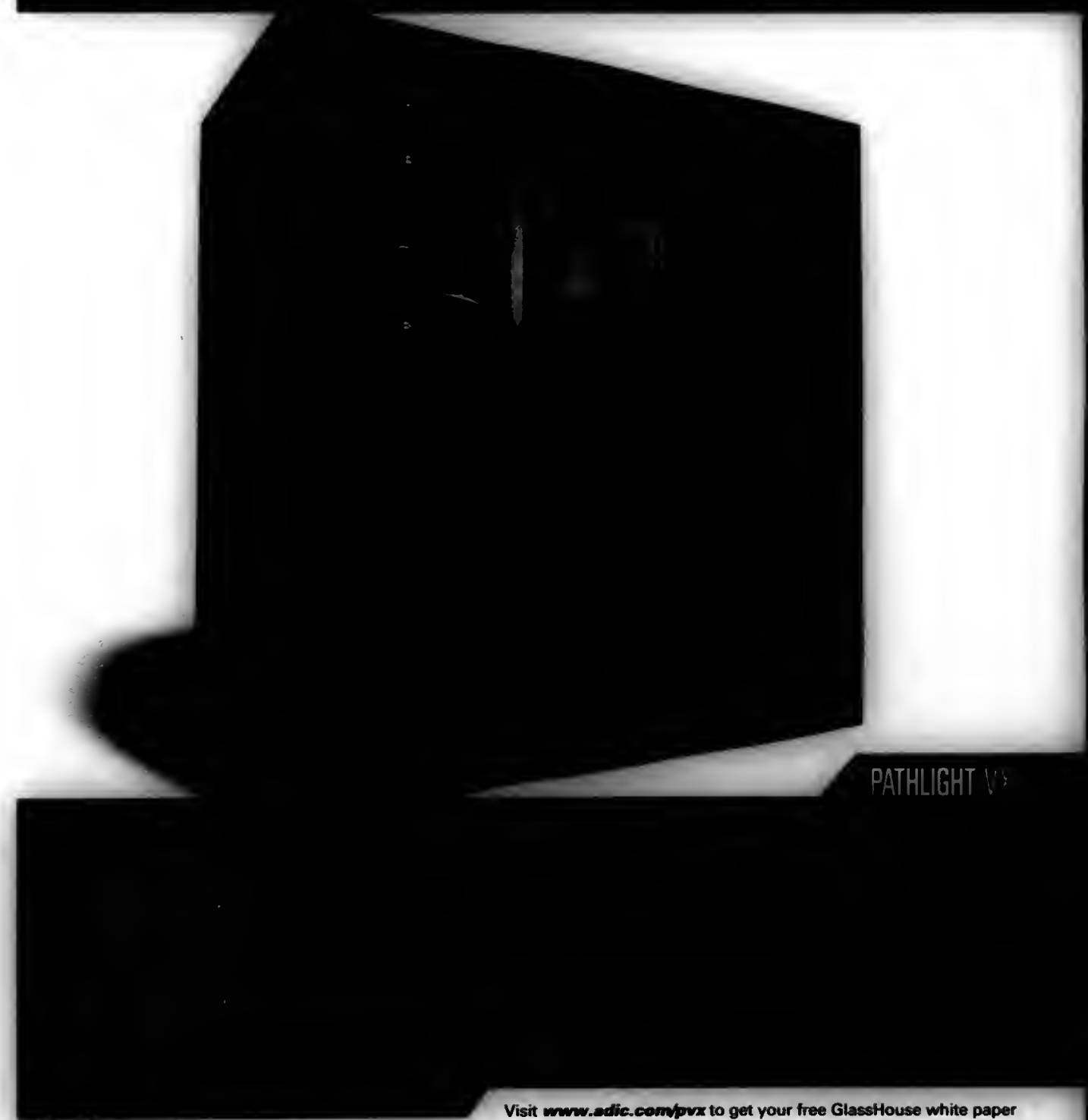
THE NIGHT SHIFT

Vendor briefings with EMC Corp. and Sun Microsystems Inc. are slated to run until 7:30 or 9 p.m. But Popolano says his day usually ends at 7 p.m. – assuming there are no phone calls to or from Japan or any of AIG's other international offices.

"It's a hectic schedule," he says, "but I wouldn't have it any other way."

– CAROL SLIWA

THE BRAINS TO BACK IT UP.



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WILLIAM WESTRATE:

William Westrate, 44, was vice president and CIO at food and facilities management company Aramark Corp. until Sept. 30, 2005. While in that role, he headed up the development and rollout of a tool called ISISpro to integrate data about housekeeping, patient transportation, clinical equipment management and plant operations for Aramark's front-line managers and its hospital customers. *Computerworld*'s Heather Havenstein talked with him about his work.

How does ISISpro work, and what prompted you to develop it internally vs. looking to off-the-shelf products? We were really creating these silos of people because we had systems that would serve housekeeping great, plant operations great . . . but we would never have a comprehensive view of how we were doing in our account in its totality. There were products that would help us do plant maintenance or preventive maintenance, but nothing that would give us one tool.

We've been able to win significant business opportunities now because we have an integrated offering. We can create a seamless integration from the standpoint of helping hospitals really improve their throughput. We've really helped the discharge process and making a room available much quicker because of our ability to move in a seamless way.

What is your management philosophy, and how did you motivate employees and encourage alignment between IT and the business? I consider my clients to be the people we serve every day, [and] if we are not talking with them about business issues, we can't solve their IT issues. I want those people who have that direct contact with the business to have strong business and IT skills to create the alignment.

If they aren't talking to them in their business language and aren't able to talk to them intelligently about IT, you won't get the alignment. [With] someone who came up through the IT ranks but had a more business tendency, we created a business track for them. That person was the key contact for a whole line of business. I also hired people who had very strong business understanding but also showed they understood systems development and the needs of the IT [group].

How much of your time was spent on daily tactical work vs. big-picture planning, and how did you carve out time for strategic planning? You have to be pretty disciplined about it. Sarbanes-Oxley takes so much time away from the organization that if you don't have a team taking care of that, you would be so involved it would distract you. You have to take time to understand the big issues the business is trying to address.

On a monthly basis, I got together with the senior team to review what was going on in the business. I was also involved with a number of strategic planning activities in the business. When the business was looking to expand to a new line of service or an acquisition, I was an integral part of that. If you are viewed as being second- or third-level down, you won't be strategic — you will be an order taker.

The industry continues to ebb and flow between different types of technology deployments, but it is still about being in alignment with the business, keeping your costs down and providing value to the business — not just being a utility. If you become a commodity, there is no reason why you shouldn't be considered something that can be outsourced. ▶

HOW THE LEADERS WERE CHOSEN

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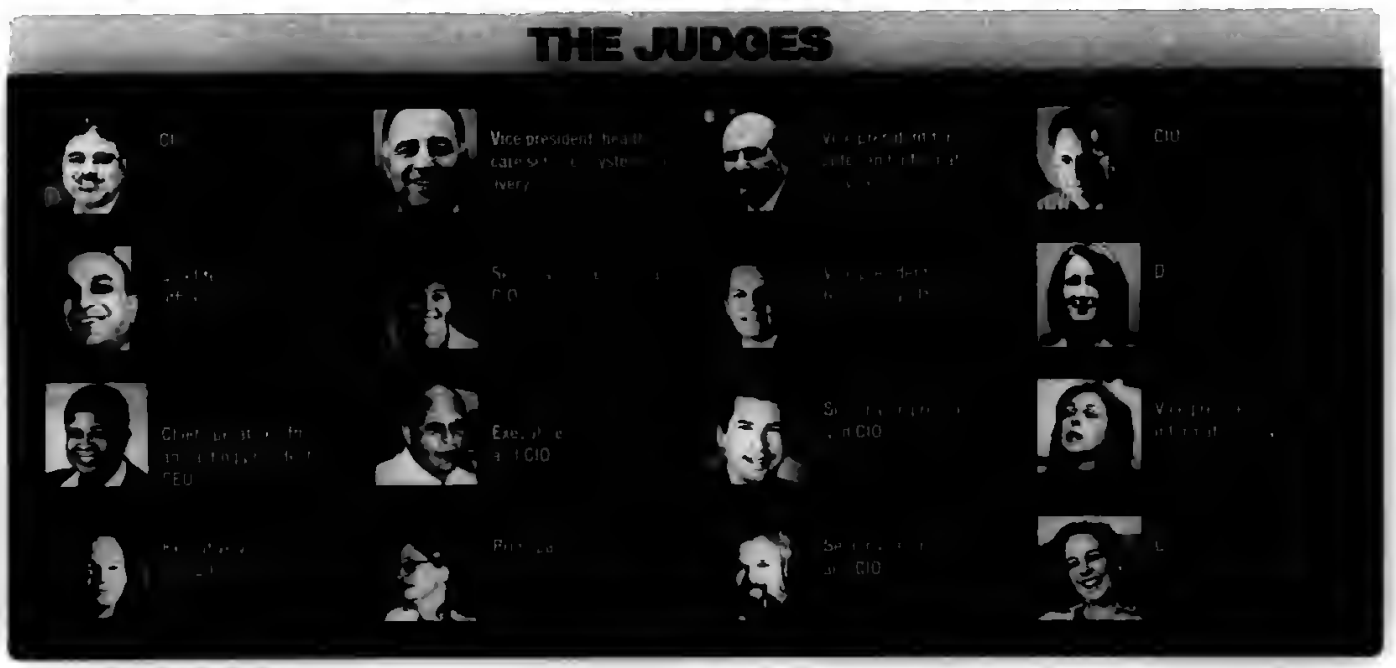

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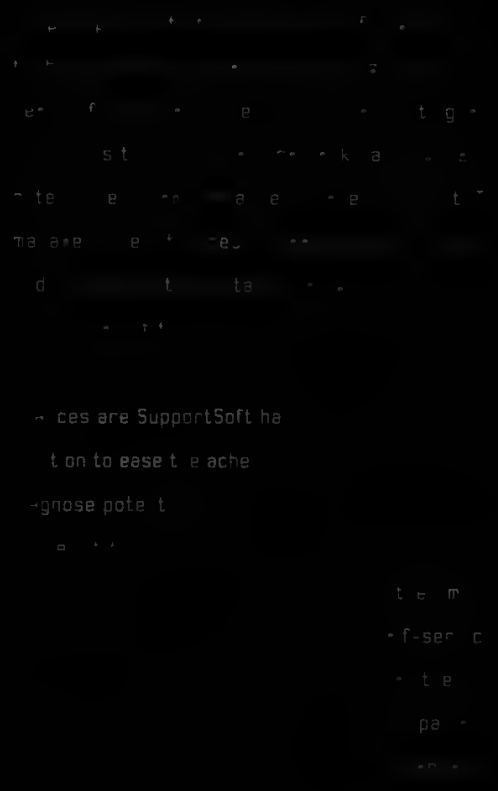
Constant technology change causing an IT headache?



SupportSoft

STEVE YON

TITLE: Senior vice president and director of common services

COMPANY: National City Corp.

MENTOR: Joe McCartin, CIO

HOW ARE YOU BEING GROOMED FOR YOUR NEXT POSITION? It's a combination of exposure to business context – working with our lines of business to make sure I'm grounded in their objectives, strategies and plans – and providing me the opportunity (and holding me accountable) for leadership on some of the large transformational activities. This serves in two ways: first, to deliver value to the organization, and second, to build credibility with the senior teams.

WHAT'S BEEN YOUR CAREER LADDER? After graduating from MIT, I progressed from design engineer through director of engineering roles at NCR Retail Systems. After that, I left to take on the role of president of Holaday Industries, an instrumentation firm. I was brought in to drive a refresh/turnaround in order to enable its acquisition. After the sale, I assumed the role of brand director for Dell Computer's OptiPlex PC product line [and was] responsible for brand management, marketing, portfolio management, etc. From there, I moved to National City (coming back to my hometown of Cleveland) and am currently leading the shared services function within IS. I have been here about four and a half years.

WHAT SPECIAL SKILLS DO YOU BRING TO YOUR JOB? Since my background is broad, with technical depth as well as being accountable for business operations and sales marketing, it allows me to have a fairly good perspective on "fit" – where things are, where they're going, how to explain things to multiple levels of people in the organization, why we do the things we do. I'm leveraging my background to translate experience into actions while helping coach people. I have a high raw energy level and a passion to continually and radically improve things to help the team win.

All of the honorees reported that they are mentoring someone on their staff, and a clear majority have chosen a successor
28%
Have not
72%

WHAT'S IMPORTANT ABOUT HAVING A CAREER MENTOR? He or she can impart wisdom. A mentor can provide you with a different perspective, a "portal" of their own experiences, if you will, that can shed some light and insight in order to bring clarity to your perspective. That allows you to determine how you want to – or don't want to – apply yourself to your particular situation.

ARE THERE ANY DOWNSIDES TO BEING MENTORED? With the (hopefully rare) exception of getting bad advice, I can't think of any downside. I can say that engaging in mentoring does build the mentee's ability to discern good from bad, develop an intuition for things (let's call that wisdom) and identify blind spots where he or she can purposefully target specific types of coaching or advice.

ARE YOU MENTORING ANYONE? Oh yes, I mentor and get mentored from hundreds of people. I do that every day, formally and informally. Formally with my direct leadership staff; informally with all the conversations I have with anyone and everyone I run across. Spending time with as many people as I can helps impart the view from here to help them in their awareness, understanding and fit. It enables them to make better decisions from a professional as well as personal-aspiration perspective, as well as earn their trust, their respect and their commitment to our company's path. Mentoring is an exceptionally healthy activity – you should get and give a couple of good servings a day!

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Vice president, benefits administration division

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What's been your career ladder? I worked at Graduate Health Systems in the information systems department for 10 years and then moved to Coopers & Lybrand (which became PricewaterhouseCoopers Consulting) as a principal consultant in the Solutions Through Technology practice. One of my clients was Cendant Mortgage Corp., whom I went to work for as a vice president in the IT department responsible for operations improvement.

I then moved from the mortgage business to the corporate offices as vice president of applications development and support. My mentor, Helen Cousins, was corporate CIO. I worked with Helen for about three years and left there in 2003 to go to Blue Cross and Blue Shield of Louisiana.

What special skills do you bring to your job? I have strong analytical and management skills. I'm able to empower the people who work for me and encourage them to take risks. I'm an experienced systems development manager so I can bring large projects to closure. We're getting ready for a go-live for a $45 million core operations systems implementation that will replace our 30-year old legacy system, for example.

What's important about having a career mentor? There are four things Helen really helped me with. The first is understanding organizational politics – you have to know when to hold 'em and know when to fold 'em! You have to assess the political situation early on and make decisions on forward-looking strategy not only on the facts, but also the political landscape.

The second thing is to make split-second decisions without 100% of the information. I had a consultant background and naturally wanted to do a lot of analysis before making decisions. [Helen] taught me that from a market perspective, sometimes it's very important to be fast. Timing is huge.

Helen can really synthesize a lot of analysis quickly, moving through the information to weed out the important things, based on three critical drivers. She liked to first be presented with three bullet points, and I have carried over that philosophy. The three things she wanted were the financial implications, the risk and the suggested path going forward. After that, I would provide alternatives and more background information.

The third thing is speed. I'm relatively fast, but Helen was so much faster. She forces you to quickly ferret out the important information.

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Are there any downsides to being mentored? You get feedback even when you don't want it. [Laughs.] Seriously, having the right mentor is truly a win-win situation. I could learn from her and in turn make her more effective. Mentoring is truly a relationship, and you have to be able to find someone with whom you have a degree of simpatico. Mentoring programs can work well if the people are well matched, and if they are not, it's important to say so.

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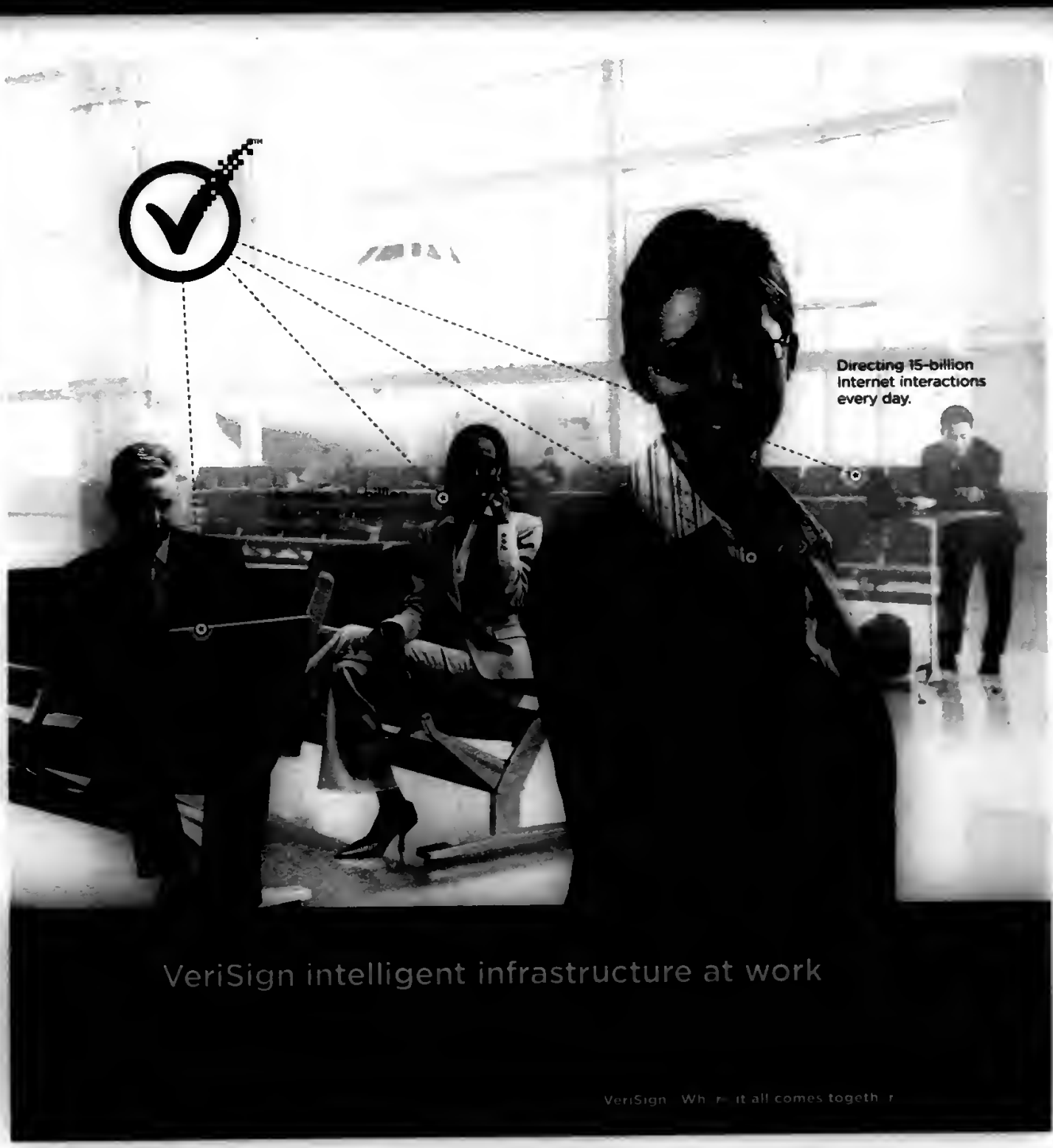

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MICHAEL R. DEAN

TITLE: First deputy CIO

ORGANIZATION: City of Philadelphia

MENTOR: Dianah Neff, CIO

WHEN PHILADELPHIA CIO Dianah Neff attends executive council meetings, her first lieutenant, chief IT operations officer and principal protégé Michael R. Dean, is seated at the table next to her.

Dean also handles all IT contract negotiations and very often attends key meetings with the mayor and other officials in place of Neff, who travels frequently to promote the city's Wireless Philadelphia project.

What's best about being mentored by Neff, Dean says, is that "she's willing to let me go out and give it a shot. She gives me the opportunity to be successful."

In his former position as head of professional services for a Big Five consulting firm, Dean, a Philadelphia native with a degree in economics, says he spent a lot of time advising companies on how to run their technologies. He chose to move into city government so he could grow beyond an adviser role and into a full-fledged operational role.

The position as first deputy CIO "gave me the personal responsibility to not only come up with an IT vision and strategy, but to actually stick around and see it through," he says.

The two greatest assets Dean says he brings to his job are an understanding of business and an understanding of people – both of which are abilities he developed under Neff's tutelage.

"Dianah really taught me self-awareness and emotional intelligence," he says. "It's about understanding what you're good at, what your personality really is like and what the situations are where you might not be performing at your best. It's about being able to anticipate and watch your behavior, whether it be in the midst of a critical business decision or a conflict of opinion.

"I truly think that Dianah is a world-class executive. She listens, she shares, she gives open and honest feedback," Dean adds. Those are skills Dean intends to take with him to his next job, which he says will not be in city government.

"I'm going to be running an enterprise in five years," he says. "I hope to have made the transition from government and into general management, maybe as a COO."

– JULIA KING

Ask a Premier 100 IT Leader

WENDELL FOX

TITLE: Senior vice president, North American Information Resources Field Services

COMPANY: Marriott International Inc.

Fox is this month's guest Premier 100 IT Leader, answering readers' questions about skills enhancement and project management. If you have a question you'd like to pose to one of our Premier 100 IT Leaders, send it to askaleader@computerworld.com and watch for this column online each month.

It seems that IT workers 50 and older are having a more difficult time finding IT jobs. What can these workers do to ensure that they have the skills, experience and education for future opportunities? In my own case, I would like to work another five to 10 years before retirement. – D.S.

IT professionals are faced with an ever-increasing pace of change, with the two biggest drivers being Moore's Law and globalization. A first step to keeping your technical and other skills current (and continuing to be an attractive resource in the job market) is to learn everything you can about your business, paying particular attention to the vision that your company's leaders are articulating. Then ask how the IT department is enabling that vision — what are the company's current technologies, and how are they being used? What are the IT organization's short- and long-term strategies to meet the business's needs? Do your strengths fit into these strategies?

Use this information to create your own development plan, and remain current in the technologies and business processes that are important to your company. For those individuals not currently working, the process is similar. Rather than looking internally, look more broadly to identify the current and future technologies being used to enable the industry you're interested in, and build your plan accordingly.

I also can't say enough about reading. Read industry and trade publications to learn how innovative companies are using technology to create competitive advantage. Learn about hot skills as well as technology issues that may be presenting broad challenges across organizations, like security is today. Armed with this information, focus on areas that are both appealing to you and in high demand.

Another positive consideration for those of us over 50 is workforce demographics. The workforce in America and other industrialized nations is aging. As baby boomers age, companies will look for ways to retain their institutional knowledge. To keep older workers engaged, many companies are offering flexible work schedules, opportunities for remote work, and part-time and contract options. In looking for employment, you may want to keep these nontraditional opportunities in mind.

I'm just starting my career in IT. Other than programming, what's a good IT job to start with? – C.K.

Look for jobs that will provide opportunities to learn about your business and industry. Regardless of your functional area, the more you know about the business you are in, the better equipped you will be to help your company leverage technology to achieve its goals.

Programming is a good place to start, as are corporate help desk support and systems administration. In large companies, working in a corporate data center can provide individuals with the opportunity to learn, observe and perhaps work in many different jobs within IT.

For an individual just starting an IT career, having the opportunity to see and try many different roles might lead to a particularly exciting job and, eventually, specialization. Based on my experience, unless a person already has passion for a specific job or field of expertise, he should be willing to try many different things and learn new skills.

I have more than six years of experience in sales and marketing of IT engineering products and services and have also been involved in project management and requirements-gathering activities. An injury sidelined me for 18 months, but I have since recovered and look forward to resuming regular employment. My interests are project management, business analysis, sales and marketing. Would a certification in project management be helpful to me, and will this gap in my employment be an obstacle for me? – S.D.

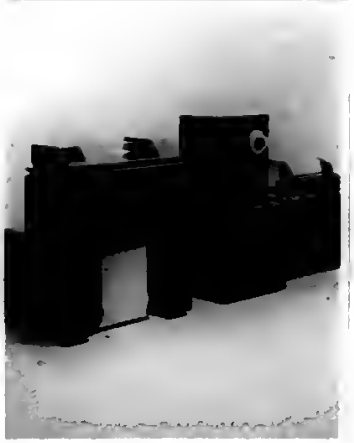
It is my experience that there has never been a surplus of really great project managers. I also believe that project management is a truly portable skill across companies and industries.

Individuals interested in a career in project management should take every opportunity to learn and improve their skills. Certification is something that I look for when hiring project managers. There are many excellent programs in our colleges and universities, and experience can also be an excellent teacher. Personally, I would follow both paths. I would enter a reputable project management program — whether for a PMP, a master's or some other certification — and look for an opportunity where I could use what I am learning in real time in the real world.

OUR KNOWLEDGE OF WHAT CIOs NEED GOES BACK

and forward

A LONG WAY.



While the title of CIO may not have existed 65 years ago, that's how long Fujitsu has been developing innovative technology solutions for the world's leading companies.

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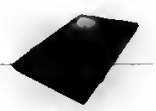

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Boys & Girls Clubs is building a succession plan for the organization's rising stars.

Today's IT leaders are passing along their knowledge to handpicked up-and-comers.

BY MARY K. PRATT

THE NEXT Generation of IT

BILL REGEHR is always looking for people with promise. "There are just some people you see and know instantly that they're worth investing in," he says.

But recognizing those people and shepherding them to the top are two different tasks. That's why Regehr, senior vice president of IT and CIO at Boys & Girls Clubs of America in Atlanta, believes in succession planning.

"We get so caught up in the pace of business and the pace of life that too often we don't stop to think about the next generation," he says. "We have to become more intentional about passing on those things [we've learned]. People passed it on to us; a lot of people invested in me. I owe it to the next generation to pass that on."

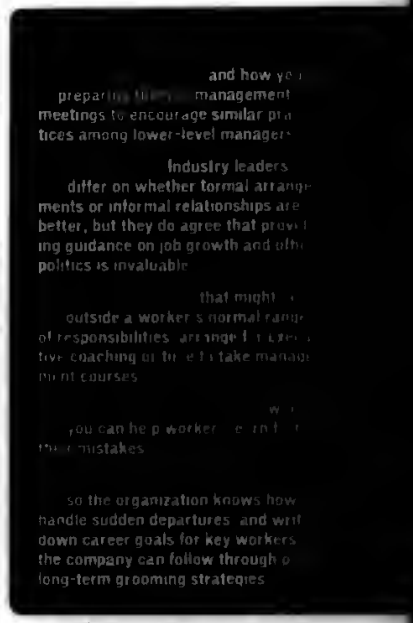
Regehr isn't the only CIO who thinks that way.

IT executives may be great innovators, but this year's Premier 100 IT Leaders are sticking with the old belief that great leaders are made, not born. They're following conscious strategies to train and educate those rising through the ranks. Their goal is to groom the next generation of IT leaders to ensure the success of their IT departments — and their companies' competitive edge — into the future.

"Companies that are successful are looking at [their] leadership pipeline constantly, because that pipeline is key to implementing their future," says Bonni Carson DiMatteo, president of Atlantic Consultants Inc., a Wellesley, Mass.-based consulting and coaching firm that focuses on leadership development and succession planning.

RETIREMENT SURGE

The issue is an important one for CIOs, DiMatteo and others say. Many workers, including a high number of executives, are part of the baby boom generation that's set to retire en masse in the next decade or two. At the same time, fewer people are coming into the workforce; some CIOs are already seeing a talent shortage in the IT field.


and how ye
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Industry leaders
differ on whether formal arrange
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better, but they do agree that provi
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that might
outside a worker's normal range
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you can help worker
their mistakes
so the organization knows how
handle sudden departures, and writ
down career goals for key workers
the company can follow through o
long-term grooming strategies

Meanwhile, the CIO's role continues to expand, requiring not only updated technical skills but also, increasingly, business acumen to successfully perform the job.

"The challenge for the CIO is to be really forward-thinking about this, to get the message across that [it] is really important" to train the next generation, DiMatteo says.

Regehr's already there. He's thinking about who will replace him. He's building succession plans for the two levels of management below him. And he's taking steps to make sure rising stars within the Boys & Girls Club can step up when needed.

How is he doing all this? He hired a professional career manager to work with one potential leader. He sends some workers to management seminars at the Georgia Institute of Technology. And he gives board-level assignments to others to help them develop new skills.

Regehr is also working with someone he thinks could someday take

Continued on page 84

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ANN STOCK

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Continued on page 84

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Continued from page 82

over as CIO, showing him the ropes and bringing him to CIO conferences to prepare him for the role.

IN BLACK AND WHITE

Toby Eduardo Redshaw, corporate vice president of IT strategy, architecture and e-business at Motorola Inc. in Schaumburg, Ill., has been grooming upcoming leaders as well. Redshaw has taken a formal approach to the process: He has written plans for every management staffer in his shop. His managers also identify replacement candidates within IT, outside IT and then outside the company.

Redshaw says written plans motivate workers, who "know they have a way up through the organization," and they allow him to move around talent "without a lot of consequential damage," such as hurting team morale.

Consider, for example, how Redshaw handled a recent personnel change: When the leader of his integration services division moved to the enterprise business unit, Redshaw was able to announce his replacement in just 24 hours because succession plans were in place.

Redshaw works with his staffers to help them advance, using their annual reviews to look at strengths, weaknesses and development paths. He then puts people in situations that test them and sends them for formal training. He says he has also established a management structure "that cares about and knows that development is important."

"You've got to have a culture that allows people to fail. That's where a lot of the learning is," Redshaw adds.

Others have adopted similar approaches to getting the next generation ready for executive jobs.

John Schindler, CIO at Kichler Lighting in Cleveland, has a chart that identifies "fast-track individuals." He details their training and development needs along with their goals for professional development. "I know the individuals I'll be grooming and investing time in," he says.

For example, he makes note of which of his direct reports have MBAs and who is studying to earn one. To help these employees along, Schindler says he assigns them projects where they can practice new skills.

Schindler recently assigned one staffer some accounting and strategic planning work after he finished his MBA. "This is an area that wouldn't normally be under his purview, but he was very appreciative for the opportunity," he says. Schindler even puts himself out there as a mentor, talking to people informally to learn about their work and aspirations.

Such mentoring can be a significant contributor to professional success, according to a 2003 survey conducted by Robert Half Technology, a Menlo Park, Calif.-based provider of IT professional staffing.

The survey polled more than 1,400 CIOs at U.S. companies with 100 or more employees. Fifty-one percent said they benefited from having a mentor at some point in their careers. Meanwhile, 72% of those who didn't have a mentor said they felt their advancement would have been easier if they'd had an experienced adviser guiding them.

MULTILAYERED APPROACH

Robert S. Autor, executive vice president and CIO at SLM Corp. (Sallie Mae) in Reston, Va., sees several dimensions to mentoring. He says the right approach includes providing regular feedback as well as informal advice to help employees be more effective. He says it can also mean bringing in outside help, such as executive coaches.

Autor says good mentors lead by example, too. He, for one, takes time at management meetings to discuss talented staff members, a practice he hopes filters down through the organization.

He also believes that good mentors provide protection. "If you're going to help people overcome their weaknesses, you need to put them in positions were their weaknesses are challenged," explains Autor. But those circumstances can cause problems, be adds, so CIOs need to help "smooth out some of the bumps."

Charles Hunsinger, vice president of software engineering at Corporate Express Inc., an Amsterdam-based company with U.S. headquarters in Broomfield, Colo., says his IT workers benefit from the formal training programs run by his department and by human resources.

Many workers also benefit from informal mentoring — a strategy that Hunsinger claims works better than a formal program that pairs a senior worker with a junior colleague.

He says formal arrangements might not work because "sometimes it clicks, sometimes it doesn't." And while leaving mentoring to informal connections might mean that some people slip through without that extra guidance, Hunsinger says he finds such relationships to be much better when they're not structured.

"It's really a personal relationship that you have to build," he says.

Others, however, find benefits in more formal arrangements.

Kay J. Palmer, CIO and executive vice president at J.B. Hunt Transport Services Inc. in Lowell, Ark., has a leadership development program for her department that uses both in-house training and customized training developed with a local firm specializing in leadership development. The training involves standard practices, such as 360-degree assessment tools, in which coaches get feedback on an individual from various professional circles.

Managers can also recommend promising workers for a corporate leadership program that's being developed at J.B. Hunt, and Palmer's trying to bring a mentoring program to the company, too.

"Very few leaders naturally possess strong technical, business and diplomatic skills," she says. "Mentoring and coaching is required to help a successor be effective in all three."

Pratt is a Computerworld *contributing writer.*

ONLINE

HOW CLOSE ARE YOU TO BECOMING AN IT LEADER? Take our online quiz to assess and steer your development:
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REACHING OUT
To Women And Minorities

DESPITE RECENT GAINS, women and minorities are still underrepresented in the executive suite and the IT ranks, industry leaders and diversity advocates say. CIOs need to recognize the issue to ensure that women and minorities are encouraged to rise to upper-management positions, they suggest.

"The first step to any change is a conscious acknowledgement that there is a problem and something has to be done," says Carolyn Leighton, chairwoman and founder of Women in Technology International (WITI) in Shawnee Oaks, Calif.

She and other advocates say executives need to consciously look for female and minority candidates, and to do so successfully, they have to change the way they recruit candidates and groom future leaders.

Kay J. Palmer, CIO and executive vice president at J.B. Hunt Transport Services, notes, "One of the underlying goals of [our] mentoring program is to give all high-potential employees the opportunity to work with executive mentors across the company." If a program doesn't exist to facilitate these relationships based on ability, she says, such relationships often instead develop based on shared personal interests, which sometimes excludes females or minorities.

Other leaders say CIOs need to do more to cultivate relationships with women and minorities and the organizations that represent them, such as WITI, to get a better handle on attracting them to certain jobs or companies.

"You have to be intentional about it," says Bill Regelv, senior vice president of IT and CIO at Boys & Girls Clubs of America. "I've challenged our HR people to go out and find me high-quality minorities and women to come into our technology slots."

Regelv and others say the intent isn't to fill quotas or lower the bar just to increase diversity. Rather, they say, it's about reaching out to groups that might be shut out by traditional mentoring relationships.

However, some CIOs say a well-crafted work environment that values all individuals can be successful in promoting talented workers, regardless of gender or minority status.

"I think overall you want to assess the potential of all the people in your organization," says Charles Hunsinger, vice president of software engineering at Corporate Express. "I don't think you want to pick and choose who wants to succeed. You want to try to mentor everybody."

– MARY K. PRATT

FRANK HAYES •

IT Heroes

INFORMATION technology can be wonderfully agile when we have careful planning, standard processes and great communication. That's the message *Computerworld*'s Julia King got from the IT leaders among this year's Premier 100. In fact, it's that stability that makes real IT agility possible.

Or, to put it another way, we *can't* do wonderful things if we spend all our time heroically putting out fires.

That's a kind of IT heroism we can no longer afford. But we've had nothing to replace it with — until now.

And that has been a problem. IT people, from the greenest intern to the most seasoned CIO, want to be heroes. We all want to solve the problem, rescue the project, resurrect the network, save the IT budget. We want to demonstrate our value by making things work and keeping them working.

Unfortunately, for too many years that's exactly what we've had to do. Every time technology has jumped a level, we've scrambled to keep up. We've whipsawed from mainframes to minis to PCs to client/server to intranets and extranets. The hardware was shaky. The software didn't work. The networks were full of hiccups. In the early days after any technology shift, it took heroism just to keep things going at all.

And once those first days of crisis were over? We missed the excitement. We looked for new ways to be heroes. We knew the alternative was dull stability.

And we knew — or hoped — that the next technology wave could hit us at any time, washing out whatever planning and processes we had in place. So there was no point in buying into rigorous processes and inflexible planning, was there? We needed the agility to ride that new wave when it came crashing in on us.

Or anyway, that's what we told ourselves. So we have shelves groaning with unused methodologies and architectures. Fair is fair: Much of that shelfware was rigid. It would have required large investments in training and discipline. And if it didn't survive a technology transition, that all would have been wasted.

Besides, it sure didn't look like much fun. And if that was the alternative to IT heroics, who needed it?

And that's the way we've seen the choice: heroic adventure or brittle tedium. No surprise, then, that we've chosen to keep fighting IT fires.

But as our Premier 100 winners demonstrate, there's plenty of room for heroism, even when planning, processes and communication give us rock-steady IT. It's just not old-fashioned IT heroism.

It's heroism for the business.

Heroism that makes it possible to win a big new customer. Or develop applications without adequate user specs that still deliver exactly what the users need. Or extend a business in radically new ways.

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Because IT needs all the heroes it can get. •

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University IT director has a brainstorm to stop students from downloading songs from the Internet: All dormitory networks will be capped at 100Kbit/sec. instead of 100Mbit/sec. "It certainly made downloading anything impossible for students," says an IT pilot fish there. "It also cut communications that controlled heating and cooling. And made the access card readers at the doors stop working. And the parking lot access card readers. And the dining services computers. And he instituted the change Friday afternoon. The cap was lifted Monday morning."

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MANAGING UP
Pilot fish has installed new antivirus software everywhere except on two PCs: one at the company president's home and one at his vacation house. Prez has no trouble following fish's instructions for the PC at home, but a month later, fish gets a call from the vacation house. "I've tried and tried, and I can't find the files to install it," prez says. Let's go one step at a time, says fish. First, make sure the CD is in the CD drive. Pause. "Yeah, that would probably work," says prez. "I'll call back if I need anything else."

ANSWER SHARKY'S CALL. Send me your true tale of IT life at **sharky@computerworld.com**. You'll score a sharp Shark shirt if I use it. And check out the daily feed, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky.**

FRANK HAYES ■ FRANKLY SPEAKING

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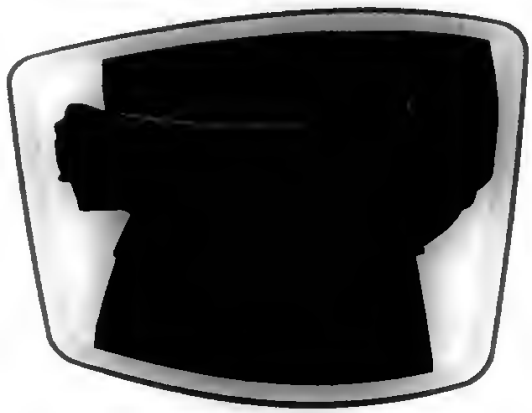

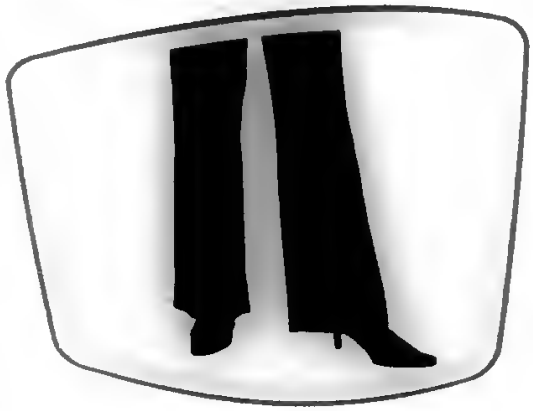

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Senior Software Analyst – Responsible for customer business needs analysis, IT solutions, outsourced software development, testing and consulting. Develop new practice areas, IT solution sales, and support IT solution and product deployment. Refer to job #37DSA-1 and reply to: hr@37degrees.com or 37 degrees, Inc. 465 California Street, Ste 660 San Francisco, CA 94104

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Intratel, LLC., located in Las Vegas, NV, seeks a Senior Software Engineer. The position requires a Masters degree in Computer Science and 2 years experience in Technology Design, Programming and Systems Analysis. Fax resumes to Maria Nuno, Director of Administration, at (702) 221-0904 or mail resumes to Intratel, LLC, 101 Convention Center Drive, Suite 700, Las Vegas, NV 8910

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Management Systems Engineer with a Master Degree in Computer Science or equivalent & 2 years as a system analyst project leader or related experience to coordinate development of customized software design for programs used in systems architecture of applications oriented towards security of information of highly networked financial environments. 13747 Montfort, Suite 300, Dallas, TX 75240. Fax: 972-404-9267. EOE

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Applications Engineer, multiple positions. Send resume to HR, ABB, Inc., 1601 Industrial Blvd., Sugar Land, Texas 77478. Must ref job code SrAppsEng-100780.

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Responsible for the overall security of information resources of the University. Provides computer forensics, vulnerability assessments, monitors and audits systems, antivirus, antispam and patch management. Responsible for contingency planning and security support. MSCS/CE/EE with 2 yrs. related exp. Or BSCS/CE/EE with 5 years of experience. Submit resume to: University of Texas at El Paso, ATTN: Gerard D. Cochrane - JO #45, 500 W. University Ave., El Paso, TX 79968. EOE.

KINDER MORGAN

Senior SCADA Engineer, Kinder Morgan, Inc., Houston, TX:

Resp. for manag., supvl., coord. and testing of Supervisory Control and Data Acq. (SCADA) systems for Oil & Gas Ind. incl. devel. SW specs and code for SCADA/Gas Measur. Systems and serving as Sys.Admin. of Sybase-based SCADA system running Digital UX v4.OE/F and HP UXv11.x. BS (or equiv educ., training and/or exp.) in Comp/Sci or Comp.Info.Systems reqd plus 5 yrs exp. performing duties of the position or 5 yrs prof. exp. as SCADA-based Systems Engrs. in Oil & Gas Industry. Must have exp. w/OASyS v6.2 Telvent SCADA (install., config., manag. and devel.) and Telvent GMAS (Gas Measur. Accounting Sys.) and strong working knowl. of gas measur. process. Any appropriate and equiv. combo of educ., training and/or exp. will be acceptable.
Please fax resume to 713-369-9411 and reference Job#KMI-17.

Analyst/Developer with Goldman Sachs & Co. in New York, NY. Design & develop securities lending real-time distributed position management system. Produce complex strategies on multiple underlying financial products to markets of US & International exchanges. Req'd: Bachelors in Computer Science, Engineering, Economics or related field plus 2 years exp in offered position or as software analyst. Exp must incl designing & developing equities, fixed income, & commodities trading systems utilizing EJB & JMS, Weblogic component technology, & SQL programming using Sybase Adaptive Server in the financial services industry. Job Code: TECH10905AD. Apply: https://goldmansachs.recruitmax.com/wng/candidates using "Build Your Profile" option. Candidates must specify job code in "Specific Type" field. NO PHONE CALLS PLEASE.

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Resp. for architecting, designing & implem. layer 1 DWDM & SONET optical transport networks for enterprise custs & service providers incl. scope, close & deliver Transport Focused Consulting Services, lead optical network implementations and provide techn. sales support. BS (or foreign equiv.) in Electrical or Computer Engin. req'd + 4 yrs exp. performing duties of the position. Must have exp. designing Metro & Long Haul fiber-based networks w/ SONET Ring technology & DWDM products. Extensive (60%) U.S. travel req'd. Resume only to Careers@centrepath.com

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Senior Systems Analyst - Manager to lead Service Desk consistent with industry best practices. Resolve system outages, component failures. Ensure SD operates as central contact between users/providers of IS services. Refer to Job #SD-1 and reply to: mscals@nemours.org or Nemours, Inc. (CBO) 12735 W. Gran Bay Pkwy., Building 100, Ste. 200, Jacksonville, FL 32258. Job located in Orlando.

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- EAI Development JO-270
- QA Analysts JO-280
- Web Content Developer JO-290

Positions require either a B.S. degree in a related field and 1-2 yrs. of exp. w/specific skill sets. Some entry level positions are available & require a M.S. degree & related coursework or exp. Some senior level positions are also available & require 5 yrs. of progressive exp. Competitive salaries. Must be willing to travel/relocate. Send resume to: jobs@TechUS.com. Refer to specific JO# for consideration. Applicants must have authority to work permanently in the U.S.

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COMPUTER/IT

Senior Programmer Analyst. Req. Bachelor's degree (or higher) in CS or Eng. Req. 5 yrs. exp. in software eng. and application programming using PL/SQL or SQL/Sybase & Perl on Oracle platform 3 yrs. of stated exp. must have incl. exp. designing applications for mortgage cash flow generation, mortgage pricing and analytics. As member of Fixed Income Risk Management IT team, design, develop & implement software pricing models using PL/SQL & Perl on Oracle platform for further automation of NAV of portfolios. Design applications for mortgage cash flow generation, mortgage pricing and analytics. Apply with resume to: Sonali Accetta, Alliance Capital Management L.P., 1345 Avenue of the Americas, 20th Floor, New York, NY, 10105.

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Software engineer to design, develop and test computer programs for business applications, analyze software requirements to determine feasibility of design, direct software system testing procedures. Requirements: Bachelor's Degree, educational or functional (3 years experience=1 year of college) equivalent, in Engineering, Computer Science or related field and one year experience as a software engineer or computer programmer. Working Conditions: 8:00 A.M. to 5:00 P.M., 40 hours/week, involves extensive travel and frequent relocation. Apply: Elite Careers, LLC, 1910 Cochran Rd, Manor Oak 2, Suite 205, Pittsburgh, PA 15220, Attn: Stephanie Mesmer, Job No 112105

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Sr. Systems Analyst/Project Manager. Reston VA to provide technical assistance to sales team in time/ cost estimation, tech capabilities/solutions etc. Dev Project requirement analysis. Manage customer expectations/relationship, technical aspects of complex projects & location/nations ments. Research, plan & recommend software/ systems changes to meet client needs. Help client perform product acceptance tests. Strong project management, communications and relationship mgmt skills. Reqd: MSCS or rel field (BSCS & 5 yrs exp may be substituted for MSCS) & 2 years exp. in managing locations/more per day teams & to ASP, Pref: Client/server, web technologies & .NET or Java based 3 tier architecture. Send resumes & 2 references to F. Li. Ref: 6124-04, 8225 Bell Lane, Vienna, VA 22182.

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Don Tennant (508) 620-7714
Editor in chief

Mitch Betts (301) 262-8243
Executive editor

Julia King (610) 532-7599
Executive editor, events

DEPARTMENT EDITORS

Craig Stedman (508) 820-8120
News editor

Mike Bucken (508) 820-8562
Assistant News editor

Tommy Peterson (508) 620-7729
Technology editor

Kathleen Melymuka (508) 820-8118
Management editor

REPORTERS

Matt Hamblen (508) 820-8567
Networking; mobile/wireless, network/systems management

Heather Havenstein (919) 386-0361
Business intelligence; application development; Web services; application server software; health care

Eric Lai (510) 768-2818
Windows, Linux, databases, desktop applications

Lucas Mearian (508) 820-8215
Storage; disaster recovery and business continuity; financial services industry

Linda Rosencrance (508) 628-4734
General assignment; transportation and automotive industries

Carol Silva (508) 628-4731
National correspondent

Marc L. Songini (508) 820-8182
ERP; supply chain and CRM applications; food and agribusiness

Patrick Thibodeau (202) 333-2448
Enterprise systems; Unix; outsourcing and immigration; antitrust issues

Jaikumar Vijayan (630) 978-8390
Corporate security/privacy issues; manufacturing industry

Todd R. Weiss (717) 560-5255
General assignment; open-source community; intellectual property issues; messaging/collaboration

FEATURES

Ellen Fanning (508) 820-8204
Special projects editor

Thomas Hoffman (845) 988-9630
National correspondent

Robert L. Mitchell (508) 820-8177
National correspondent

Mark Hall (503) 391-1156
Editor at large

Gary H. Anthes (703) 536-9233
National correspondent

Julia King (610) 532-7599
National correspondent

OPINIONS

Frank Hayes (503) 252-0100
Senior news columnist

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Ken Mingis (508) 820-8545
Online news editor

Vin Narayanan (508) 820-8185
Managing editor/online channels

Marian Prokop (508) 620-7717
Online editor at large

David Ramel (508) 820-8269
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John R. Brilon (508) 820-8216
Associate art director

Dawn Peterson (508) 820-8131
Production designer

Peter Smith
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Kevin Gerich, Mark Savery
Web developers

RESEARCH

Mari Keefe
Research manager

Cassie Wilson
Research associate

COPY DESK

Michele Lee DeFilippo (508) 820-8126
Managing editor/production

Bob Rawson (508) 271-8015
Assistant managing editor/production

Monica Sambataro
Senior copy editor

Eugene Demaitre
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GRAPHIC DESIGN

Stephanie Faucher (508) 820-8235
Design director

April O'Connor
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Julia Quinn
Senior Designer

Susan Cahill
Graphics coordinator

ADMINISTRATIVE SUPPORT

Linda Gargano (508) 820-8176
Office manager

CONTRIBUTING EDITOR

Jamie Eckle (617) 566-1873
Opinions

CONTRIBUTING COLUMNISTS

Michael Bartenberg, Paul Gillin, Barbara Gomolski, John Halamka, Thornton A. May, David Moschella, Bert Perkins, Virginia Robbins, Bruce A. Stewart

CONTRIBUTING WRITERS

Mary Brandel, Stacy Collett, Russell Kay, Mary K. Pratt, Drew Robb

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N.Y. Hospitals, Siemens Launch Smart-Card Pilot

100,000 cards will be distributed

JAIKUMAR VIJAYAN

TWO MAJOR New York hospitals have joined with a vendor of smart-card technologies on a pilot project to provide patients with portable health care records and give doctors better access to that data.

Under the initiative announced last week, Mount Sinai Medical Center, the Elmhurst Hospital Center and Siemens Communications Inc. will start deploying around 100,000 smart cards to patients at these hospitals and several affiliates beginning in the second quarter of 2006.

Each hospital in the network will issue smart cards that integrate a patient's identity data with essential health information that can be quickly accessed and routinely updated by health care professionals who are part of the regional smart-card network.

The network will enable portability of patient health care data and help reduce medical errors caused by misinformation or lack of patient data, said Jack Nelson, CIO at Mount Sinai Hospital in Manhattan.

Nelson noted that there is much interest among health care providers and state and federal governments in making health care information more accessible to providers and patients.

The smart-card initiative can make such information portable without the need to invest in the expensive and complex infrastructure that a connected health care network requires, he said. The hospitals involved in the pilot program only need card readers and associated software, be added.

National System in Sight

The New York effort demonstrates that the federal government's goal of making patient health information portable and accessible can be attained using existing technologies, said Jonathan Leviss, medical director of Sentillion Inc., an Andover, Mass.-based vendor of identity management technologies.

Leviss had been involved in the early days of the project in his former job as chief medical information officer at New York City Health and Hospitals Corp., the city's public hospital network.

He said the success of such projects and the proliferation of smart-card-based programs now depend mostly on resolving several process- and security-related issues.

Leviss said officials must answer several questions: What patient data can be put on smart cards? Who can access that data and for what purpose? When can the data be accessed? And how can it be protected from accidental or deliberate misuse?

"As we provide information outside of the primary healthcare facility, we have to be assured that the patient data is secure," he said.

"This seems to be a fairly broad project," said Randy Vanderhoof, executive director of the Smart Card Alliance in Princeton Junction, N.J. The industry group has for some time been advocating the use of smart cards in health care applications through its Healthcare Industry Council.

Although a few hospitals have begun implementing similar networks for patient identification and authentication applications, there are only a few cases in the U.S. similar to the effort in New York, Vanderhoof said.

Such projects are also under way at Denver Health, Beverly Hospital and Addison Gilbert Hospital in Massachusetts, and Heritage Valley Health System in Beaver, Pa., according to the Smart Card Alliance.

Initially, Mount Sinai will use the smart cards in emergency rooms to identify patients and gain access to their medical histories, Nelson said.

The 64KB cards will let Mount Sinai incorporate up to 27 pages of encrypted medical history, including data on chronic diseases, current medications and possibly even compressed EKG information, Nelson said.

Smart-card vendor Siemens Communications, which is based in Boca Raton, Fla., is kicking in $2 million to support the project. The money will be used to purchase hardware and software for producing, reading and managing the smart cards. ▸

Patient Health Smart-Card Initiative

- Led by Mount Sinai Medical Center, Elmhurst Hospital and Siemens Communications.
- Pilot program will distribute about 100,000 smart cards to patients of Elmhurst Hospital, Mount Sinai Hospital and affiliated hospitals.
- Smart cards will include up to 27 pages of patient health information.
- Program will eventually include about 45 affiliated and related health care facilities.

Users Test Storage Functions in Windows Server 2003

BY LUCAS MEARIAN

Beta users of Microsoft Corp.'s Windows Server 2003 R2 operating system, which was released last week, gave mostly upbeat reviews of the technology's storage functionality.

Craig Fletcher, IT operations manager at Arcadis G&M Inc., an environmental consulting firm in Highland Ranch, Colo., said the storage resource management tools used to discover and monitor equipment on his storage-area network (SAN) have been helpful during the test period.

However, Fletcher said he also found that Windows Server R2 lacks the robust reporting capabilities necessary for data replication.

"We'd like to be able to look at the status of replication from a branch office to the hub site in real time, as well as receive automated e-mail summaries of the previous days' [business] so we know that replication [and] backups are working well," Fletcher said.

Today, he said, "we have to manually run a report if we want to know what is going on." Fletcher said he expects Microsoft to include those automation features in future releases.

Some Problems Solved

Fletcher also said that prior to installing the software, Arcadis' 75 branch offices had problems backing up 240 Wintel servers. They experienced backup failures that caused data losses, and in some cases, they had to ask untrained personnel to handle tapes.

The disk-to-disk replication and continuous data-protection features in the new release have eliminated many of those problems, Fletcher said.

The improved backup capabilities have already reduced administrative overhead and data losses, said Fletcher, though he couldn't provide details on cost savings.

"The only thing I think really needs to be addressed by Microsoft is biometrics," said Jeff Cohen, CIO at DestiNY USA, the developer of an 800-acre retail complex in Syracuse, N.Y., that will be powered by reusable energy sources like wind turbines and solar panels.

Cohen said he's been beta-testing Windows Server R2 for six months alongside a 22TB SAN powered by a high-end EMC DMX1000 array. He said the software has been able to discover and monitor all of the components on his SAN.

Cohen uses the system's storage resource management functionality and file snapshot and replication features to back up large multigigabyte files for shared use by engineers using 50 servers spread throughout upstate New York.

John Webster, a storage analyst at Data Mobility Group LLC in Nashua, N.H., said that while the final release of Microsoft's Windows Server R2 is mostly "incremental," the vendor is sending a powerful storage message: that it is trying to make those features ubiquitous for Windows users.

"The only other source for this kind of thing is potentially the open-source community, and we haven't seen the open-source community have much of an impact on storage," said Webster. ▸

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FILENET

Port Scans Don't Always Precede Network Hacks

University of Maryland study finds most attacks are made without them

BY JAIKUMAR VIJAYAN

THE ASSUMPTION that network port scans are a precursor to attempted hacks into computers may be flawed, according to research from the University of Maryland's A. James Clark School of Engineering.

An analysis of quantitative attack data gathered by the university over a two-month period shows that port scans precede attacks only about 5% of the time, said Michel Cukier, a professor in the Center for Risk and Reliability at the engineering school. The results of the research were released publicly last week.

In fact, more than half of all attacks aren't preceded by a scan of any kind, Cukier said.

"There's been a lot of discussion in the security community about whether a port scan portends an attack or not," he said. "The goal of the research is to find a link between port scans and an attack."

Fact or Fiction?

Port scans are generally believed to be used by attackers to discover open or closed ports and unused network services to exploit. Large increases in scans against a particular port have long been viewed as a signal of impending attacks against that port.

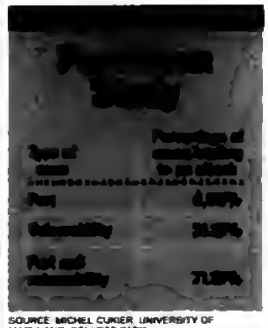
But the evidence gathered from 48 days' worth of data collected from two "honeypot" computers used in the study suggest otherwise, Cukier said. Honeypot computers are used as bait to lure hackers.

Only 28 out of 760 IP addresses that were tied to attacks against the university's computers had launched a port scan, Cukier said. In contrast, 381 of the IP addresses launched attacks without any previous port-scanning activity. The study did find that 21% of the attacks were preceded by vulnerability scans, which are used by hackers to look for specific vulnerabilities on network-attached computers, Cukier said.

The numbers suggest that only when port scans are combined with vulnerability-scanning activity is there a reasonably good chance of a follow-up attack, he said.

During the study, more than 22,000 connections to the two honeypot computers were analyzed. Scripts were developed to categorize the data into port scans, vulnerability scans, Internet Control Message Protocol scans and attacks.

For the analysis, port scans were defined as connections involving fewer than five data packets and vulnerability scans as those connections with five to 12 packets. Connections with more than 12 packets were classified as attacks.



SOURCE: MICHEL CUKIER, UNIVERSITY OF MARYLAND COLLEGE PARK

Johannes Ullrich, chief technology officer at the SANS Institute's Internet Storm Center, said that while the design and development of the testbed used for the research appears to be valid, the analysis is too simplistic.

Rather than counting the number of packets in a connection, it's far more important to look at the content when classifying a connection as a port scan or an attack, Ullrich said.

Often, attacks such as the SQL Slammer worm, which hit in 2003, can be as small as one data packet, he said. A lot of the automated attacks that take place combine port and vulnerability scans and exploit code, according to Ullrich.

As a result, much of what researchers counted as port scans may have actually been attacks, said Ullrich, whose Bethesda, Md.-based organization provides Internet threat-monitoring services. ▶

BEA Draws Up Road Map for Portal Apps

Will integrate WebLogic Portal, Plumtree software

BY HEATHER HAVENSTEIN

BEA Systems Inc. last week unveiled a two-year road map for combining its WebLogic Portal with similar software it gained with the acquisition of Plumtree Software Inc. in October.

Once completed, the integration will allow users to leverage a common set of services across portal and Web applications and provide an entryway for creating a service-oriented architecture (SOA).

Future versions of WebLogic Portal and AquaLogic Interaction (formerly Plumtree Corporate Portal) will allow users to share portlets and create components of common activities such as collaboration, search, content management, knowledge management and distributed publishing, BEA officials said.

The components will be available as services to users of both systems, according to BEA officials. The integration plan also calls for a series of new products that can package the common services so Web applications can use them.

Substantial Benefits

Pratt & Whitney, an East Hartford, Conn.-based manufacturer of aircraft engines, has 30,000 customers, partners, suppliers and employees using its extranet running on Plumtree's portal tool.

Though it doesn't use BEA's portal, Pratt & Whitney sees substantial benefits coming from the integration plan, according to manager of information service programs Colin Karsten.

For example, BEA's plans to provide common portlet components could save the company from having to write portlets on its own.

Karsten also welcomed the integration plan's focus on boosting search functions. "Search is a big deal to all of us today, especially in manufacturing," he said. "Customers use Google and Yahoo and have been trained to use search. They demand it wherever they go."

At Pratt & Whitney, the portal is used to buy products, check the status of orders in real time and access repair status reports, Karsten said.

Stamford, Conn.-based Thomson Learning, a professional and academic testing company, is already building Web services that conform to the JSR-168 and Web Services for Remote Portlet standards that BEA will support in both portal products. Thomson uses Web services and portals from BEA and Microsoft Corp. to schedule tests with and transmit scores to its partners.

"The portal standards allow our services to be exposed not just through our own customer-facing portals but also through our customers' portals," said Christopher Crowhurst, vice president and principal architect at Thomson.

Thomson plans to use the new BEA portal features next year, he said. ▶

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